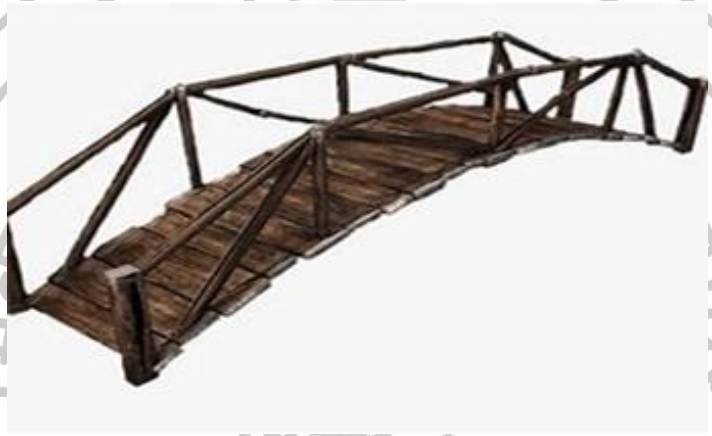
BHIWAPUR MAHAVIDYALAYA, BHIWAPUR

ARTS, COMMERCE & SCIENCE (JUNIOR & SENIOR)
ACCREDITED WITH GRADE B (CGPA- 2.54) BY NAAC BENGALURU

Syllabus of Bridge Course
Academic Session 2022-2023



Under Graduate

(BA-I, B. Sc.- I & B. Com-I& B.Voc.-I)

Foreword

The need to introduce a Bridge Course was to ease the transition of students from Higher Secondary to a University system of academics and examination patterns.

A week-long course designed by the faculties exposes the students to understand and facilitate the use of academic conventions. Bridge Course in Languages helps the students to prepare in developing their Reading, Writing, and Listening & Speaking Skills. Likewise Bridge Courses in Social Sciences, Science & Professional Courses create an amiable academic environment necessary for better understanding of the prescribed syllabi.

The advantage of Bridge Courses is that it creates a necessary basis to augment students' communication in social conversations, academic discussions and presentations.

JOBI GEORGE

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Principal

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Undergraduate

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DEPARTMENT OF ENGLISH
COMPULSORY ENGLISH
(New Course as per NEP2020)

Introduction:

Students will be introduced to Prose, Poetry, Writing Skills, & Language Study. An introduction to understanding and writing on picture comprehension will be taken up.

Methodology: Lecture Method
Beneficiaries: Students of BA-I Compulsory English.
Duration: One week (18/7 2022 to 25/7/2022)

Syllabus
Unit –I
Introduction to Prose

Unit -2

Introduction to Poetry

Unit -3

Introduction – Writing Skills

Unit-4

Introduction -Language Study

Unit -5

Picture Comprehension as Assignment

Methodology
Lecture Method

Conclusion
Bridge Course is expected to yield visible outcomes as each Unit was extensively dealt with referring to the Prescribed Units in the Syllabus.

Submitted by

DEPARTMENT OF MARATHI

अभ्यासक्रम

बी.ए.भाग–1. मराठी

:–मराठीसाहित्य महामंडळाचेलेखनविशयक नियम–(षुध्दलेखन)

1) अनुस्वार (टिंब)

उदा. चिंच,तंटा,निबंध,गुलकंद,जातांना,पंडित, चंचल.

अ) नामांच्या व सर्वनामांच्याअनेकवचनीसामान्यरूपांवरविभक्तीप्रत्यय व षब्दयोगीअव्यय लावतानाअनुस्वार द्यावा. (एकवचन)(अनेकवचन)

उदा. लोकांना, मुलांनी, घरांपुढे, तुम्हांस, लोकांसमोर.

उदा.मुलास (एकवचन) मुलांस (अनेकवचन)

घरात (एकवचन) घरांत (अनेकवचन)

ब) लिंगानुसारबदलणाऱ्याविषेशणांच्यानपुसकलिंगी रूपावर येणारेअनुस्वार–

उदा. काळीं–गोरीं (मुलें) चांगली (फळें) पांढरी (फुलें)

अर्थभेद–उदा. नाव (नौका), नांव (नाम), पांच (संख्या) पाच (रत्नप्रकार), कां (कारण) का (काय)

2) ऱ्हस्व–दिर्घ

मराठीतीलतत्समइ–कारान्तआणिउ–कारान्त षब्ददिर्घलिहावा.

उदा. कवी, मती, गती. पाटी, जादू, विनंती.

:–उपान्त्य दिर्घई–ऊअसलेल्या षब्दाचाईकार–ऊकारसामान्यरूपाच्यावेळीऱ्हस्वलिहावा.

डदा. गरिबास,वकिलांना, सुनेला, वसुलाची, नागपुरास.

3) **पूरहाग्रामवाचक षब्दकोणत्याहीग्रूनामासलावतानादिर्घोपान्त्य लिहावा.**

उदा. भिवापूर, नागपूर, तारापूर, चंद्रपूर, सोलापूर.

:–व्यावहारिकमराठीः स्वरूपआणिभूमिका–

अ) पत्रलेखन

ब) सारांषलेखन

क)बातमीलेखन

ड) मुलाखतलेखन

इ)भाशांतर

DEPARTMENT OF POLITICAL SCIENCE

Introduction

The need to introduce a Bridge Course was to ease the transition of students from higher secondary to a university system of academics and examination patterns.

A weeklong course exposes the students to understand and use of academic conventions. Especially the Political Science Bridge Course helps the students to improve their understanding and capability to apply theories in practice. It enhances academic discussions and presentations.

Objectives

- To make the students understand the basics of Political science
- To understand Indian as well as other democratic Political systems
- To understand and apply theories in use
- To write summaries and short reports in an academic style
- To make the students understand the basics of constitution

Duration One week (19/07/2022 to 23/07/2022)

Contact Hours As per the schedule (Time Table)

Beneficiaries BA –I (All Students having political Science as an optional subject)

UNIT I

- Introduction to subject
- Scope of the Political Science
- Basics of Political Science
- Introduction to Traditional and Modern Political Science

UNIT II

- Basics of Indian Political System (Constitutional point of view)
- Indian parliament: President, Legislature and Executive
- Government (Central and State) and Administration
- Judicial System: Composition and salient features

UNIT III

- Process and means of Political Socialization
- Political Parties (National and State)
- Pressure Groups and NGO

UNIT IV

- Meaning of Theory and practice
- Introduction to Natural Rights, Human Rights and Fundamental Rights
- Introduction to Liberty and Equality
- Introduction to Justice

Methodology

1. Use of Dialectic Method
2. Newspaper reading
3. Group discussion
4. Use of Audio Visual Aid
5. Providing study materials (Book form, Xerox, audio and video aid)

Conclusion

Bridge Course objectives have been fulfilled. Bridge course being short and functional in nature yielded visible outcomes. Each unit based on diagnosis of the past experiences of the faculty provided an accelerated and focused learning opportunity for the students.

DEPARTMENT OF ECONOMICS

SESSION 2022-23
B.A.-I ECONOMICS
BRIDGE COURSE REPORTING
19/7/2022 TO 28/07/2022

Sr. No.	Name of Topic	Objective	Areas to be covered	Suggested Methodology	Teaching Aids	Time & Date	Attend Students
01	Basic Concept of Economics	Importance of Welfare & Wealth	Meaning & Definition of Welfare, Relation Between Welfare and Wealth	Lecture cum interaction With Students	Lecture cum interaction With Students	48 Minutes 19/7/22 9.16 to 10.04	24
02	Basic Concept of Economics	Importance of Basic Concept in Economics	Demand: Meaning & Definition Supply : Meaning & Definition	Lecture cum interaction With Students	White Board	48 Minutes 20/7/22 10.19 to 11.07	31
03	Basic Concept of Economics	Importance of Basic Concept in Economics	Utility : Meaning, Definition , Types & Characteristics	Lecture cum interaction With Students	White Board	48 Minutes 25/7/22 11.07 to 11.55	25
04	Economics Definition	Understand the Importance of Economics Definition	Definition : Adam smith, Dr. Marshal, Prof. Robbins	Lecture cum interaction With Students	White Board	48 Minutes 26/7/22 9.16 to 10.04	27
05	Teaching Methods of Economics	Importance of Teaching Methods in Economics	Micro & Macro Methods: Meaning, Definition, Advantages and Dis-Advantages	Lecture method &Activity method	White Board	48 Minutes 27/7/22 10.19 to 11.07	19
06	Teaching Methods of Economics	Importance of Teaching Methods in Economics	Deductive & Inductive Methods: Meaning, Definition, Advantages and Dis-Advantages	Lecture method &Activity method	White Board	48 Minutes 28/7/22 10.19 to 11.07	25

Date : 30/07/2022

Dr. Sunil K. Shinde
Head Department of Economics

An Introduction

Duration – One week
Contact Hours – as per the schedule (Time Table) 03/08/ 2022 to 13/08/2022

48 minutes each every day
Beneficiaries – B.A. I Sem. Sociology Students
Subject – Relevant Subjects of First Year

Objectives

1. The paper to induct the students to sociology as the beginner of the subject.
2. the paper thus aims to expose the students to the basic concepts in sociology

Course Outcomes:

1. To create General awareness and increase understanding about the subject.
2. Prepare to students who not opt the sociology at HSC level.
3. To create the understanding within the difference between previous study of sociology and graduation level.

Unit –I

1. **Understanding Sociology**

A. Meaning of Sociology

B. Relations of Sociology with Human Life

C. Need of Sociology

Unit II

2. Emergence of Sociology

A. Sociology and Renessa

B. Sociology and Great Transformation

C. Evolution of Sociology as Science

Unit III

3. Sociology for Development

A. Sociology as Carrier

B. Sociologist as Social Engineer

C. Sociologist as Researcher

Unit IV

4. Perspective in Social Understanding

A. Sociology as a science

B. Sociology as a Critique of Society

C. Social phenomenon as a material

Methodology - Lecture method
Conclusion - Unit test conducted & found that these concepts cleared

DEPARTMENT OF HISTORY

BRIDGE COURSE REPORTING

20/7/2022 TO 25/7/2022

Sr. No.	Name of Topic	Objective	Areas to be covered	Suggested Methodology	Teaching Aids
01	What is History ? Its appearance and scope	To make the students aware of the meaning of history, its interpretation as well as the nature and scope of history	From ancient times to modern times	Lecture cum interaction With Students	White Board & Marker pen
02	Tools of history 1) Primary tools 2) Secondary devices	Explain the importance of primary and secondary tools to the students	Primary Tools - Physical Tools, Intangible Tools, Literary Tools, Non-Physical Tools	Lecture cum interaction With Students	White Board & Marker pen
03	Prehistoric	To impart knowledge of prehistoric times to the students	Palaeolithic or Old Stone Age, Neolithic Age and Metal Age	Lecture cum interaction With Students	White Board & Marker pen
04	Subaltern, local and oral history	Explain the importance of Subaltern, local and oral history	From ancient times to modern times	Lecture cum interaction With Students	White Board & Marker pen
05	Studies and teaching methods in history	Explain to students the teaching and learning methods in history	From ancient times to modern times	Lecture cum interaction With Students	White Board & Marker pen
06	Important of History	Explain the importance of history	From ancient times to modern times	Lecture cum interaction With Students	White Board & Marker pen

ENGLISH LITERATURE
(New Course as per NEP2020)

Introduction:

Students will be introduced to different literary terms and historical, social & Cultural background of English Literature of the 16th Century. A brief glimpse of the Bridge Course will orient the learners to appreciate literature in its originality.

Methodology: Lecture Method
Beneficiaries: Students of BA-I English Literature as optional subject.
Duration: One week (18/7 2022 to 25/7/2022)

Syllabus
Unit –I
Introduction to Section A- Historical, Social & Cultural Background

Unit -2

Introduction to Section B – Literary Terms

Unit -3

Introduction to Poetry especially Sonnets

Unit-4

Introduction to Prose (Essays)

Unit -5

Introduction to Drama (William Shakespeare's Romeo & Juliet)

Methodology
Lecture Method

Conclusion
Bridge course yielded visible outcomes as each unit was extensively dealt with referring to the Historical, Social & Cultural Background.

DEPARTMENT OF COMMERCE

DEPARTMENT OF ENGLISH

COMPULSORY ENGLISH

Introduction:

Students will be introduced to Prose, Poetry, Writing Skills, & Language Study. An introduction to understanding and writing on picture comprehension will be taken up.

Methodology: Lecture Method
Mode – online
Beneficiaries: Students of BCom-I Compulsory English.
Duration: One week

Syllabus
Unit –I
Introduction to successful personalities

Understanding Personality and ways to improve oneself in times of adversity

Unit -2

Introduction to Short Stories

Application of the analysis to understanding personalities in the given short stories

Unit -3

Introduction -Language Study

Practice worksheets to revise the understanding of parts of speech.

Methodology
Lecture Method

Conclusion
Bridge Course is expected to yield visible outcomes as each unit was extensively dealt with referring to the Prescribed Units in the Syllabus.

DEPARTMENT OF MARATHI

Marathi: Program Outcomes

उदिष्टेः–

1. मराठी भाषेविषयी विदयार्थ्यांमध्ये अभिरुची निर्माण करणे.
2. साहित्यलेखनाची व वाचनाची आवड निर्माण करणे.
3. विदयार्थ्यांमध्ये असलेंल्या सुप्त कलांगुणांना वाव देऊन त्यांच्यात साहित्यविषयक वृध्दिंगत करणे.
4. साहित्यातून मानवतावादी दृष्टिकोण रुजविणे.

Marathi: Course Outcomes

Class	Course	**Outcomes (Students able to do)**
F.Y. B.Com.	SEM I & II शब्दसाधना	By the end of this course, the students will be able to: CO1 भारतीय लोकशाहीचे मूल्य विदयार्थ्यांमध्ये रुजविणे. CO2 ग्रामीण जनजिवन व शेतीनिष्ठेशी विदयार्थ्यांची नाळ जोळणे. CO3 संताच्या व्यावहारीक विचारांचा परिचय घडविणे. CO4 शाहू महाराजाच्या आरक्षण विषयी विचारांचा परिचय घडविणे. CO5 काव्यातील रसग्रहणक्षमता विकसीत करणे. CO6 विदयार्थ्यामध्ये आधूनिक मूल्य रुजविणे CO7 विदयार्थ्यामध्ये सामाजीक बांधिलकी निर्माण करणे. CO8 विदयार्थ्यामध्ये सर्जनशीलता निर्माण करणे.
S.Y. B.Com.	SEM III & IV भाषा दर्शन	By the end of this course, the students will be able to: CO1 मातृभाषेची आवड व जाणीव निर्माण करणे CO2 प्राचिन मराठीचे वैशिष्ट्रे स्पष्ट करणे. CO3 विनोदी लेखनात खेळकरवृत्तीचे दर्शन घडविणे. CO4 संत साहित्यातून सामाजिक, सांस्कृतीक, आध्यात्मिक लोकशाहीचा पुरस्कार करणे. CO5 स्त्री विषयक जाणिव जागृती करणे. CO6 वृत्त लेखन व कल्पना विस्तार तंत्राची माहिती अवगत करणे.

5. साहित्यातून समाजातील प्रश्नांना वाचा फोडून त्यांचे निराकरण करणे.

ध्येयः–

1. भावी काळात विदयार्थ्यांमधून साहित्यनिर्मिती करणे.
2. अध्यापन व अध्ययनात विदयार्थ्यांना सहभागी करुन संवादशील वातावरण निर्मिती करणे.
3. विभागात विविध उपक्रमांचे आयोजन करुन मराठी भाषेचा दर्जा वाढविणे.
4. विदयार्थ्यांमध्ये संशोधनवृत्ती वृध्दिंगत करणे.
5. मराठी भाषेची प्रयोगशाळा निर्माण करणे.

SUBJECT: BUSINESS ECONOMICS

Unit I:

1. Economics-Meaning,
2. Business Economics- Meaning, Scope and objectives
3. Difference between General Economics and Business Economics.

Unit II

1. Micro Economics - Definition, scope, merits and demerits
2. Macro Economics- Definition, scope, merits and demerits.

Unit III

1. Law of Demand, Examples.
2.Demand determinants,
3.Changes in demand
4. Exceptions to the law of demand
5. Elasticity of Demand

Unit IV

1. Law of Supply, Examples. & Criticisms
2. Factors influencing supply

FUNDAMENTAL ACCOUNTING

UNIT I

- Meaning of Book-keeping & Accounting
- Objects of Accounting
- Function of Accounting
- Branches of Accounting

UNIT II

- Type of Accounting
- Books of Book-keeping and Accountancy: Journal, Ledger,

UNIT III

- Types of Subsidiary Books- Purchase Book, Sales Book, Sales Return books, Bill Payable Book Cash Book

UNIT IV

- Type of Cash Books
- Trial Balance
- Journal Entries.

M.S. OFFICE
M.S. Word

UNIT I

- Back Stage View (File); Creating, Saving, Opening & Closing of Document.
- Editing text Document, Inserting & Deleting text,
- Tool bars; Inserting Table & Pictures, Shapes.
- Icon, Smart Art, Drop Cap, Date & Time.

UNIT II

- Object: Word Art, Special Symbols, Hyperlink.
- Header footer, Page Numbering,
- Charts, Use Columns and breaks: using Steps by Step, Mail Marge.

UNIT III

- Review document using, Spelling and Grammar check**.**
- Word count: Different view of word document.
- Change the view of document; Using format painter.

UNIT IV

- Creating styles; Using Page Setup Settings, Printing of the Document. Sharing the document.

DEPARTMENT OF SCIENCE

DEPARTMENT OF ENGLISH

COMPULSORY ENGLISH
(New Course as per NEP2020)

Notice

All the students of First Year B.Sc. are hereby informed to attend One Week Bridge Course from **18 July 2022 to 25 July 2022** as per the Time Table given below.

Bridge Course Time Table w.e.f. 18 July 2022

Day	1	2	3		4	5
Time	10.30 am -11.15 am	11.15 am - 12.00 pm	12.00 pm -12.45 pm	12.45 pm -1.00 pm	1.00 pm -1.45 pm	1.45 pm -2.30 pm
Monday	Maths/Bot	Marathi	English	Recess	Chem	Phy/Zoo
Tuesday	Marathi	English	Maths/Bot		Chem	Phy/Zoo
Wednesday	English	Maths/Bot	Phy/Zoo		Marathi	Chem
Thursday	English	Maths/Bot	Phy/Zoo		Marathi	Chem
Friday	English	Maths/Bot	Chem		Marathi	Phy/Zoo
Saturday	Marathi	Maths/Bot	Chem		English	Phy/Zoo

Introduction:

Students will be introduced to Prose, Poetry, & Language Study. An exclusive Bridge Course will be taken up for Listening, Speaking, Reading & Writing Skills.

Methodology: Lecture Method
Beneficiaries: Students of BSc-I Compulsory English.
Duration: One week (18/7 2022 to 25/7/2022)

Syllabus
Unit –I
Introduction to Prose

Unit -2

Introduction to Poetry

Unit -3

Introduction – Writing Skills

Unit-4

Introduction -Language Study

Unit-5
Presentation Skills

Methodology
Lecture Method

Conclusion
Bridge Course is expected to yield visible outcomes as each unit was extensively dealt with referring to the Prescribed Units in the Syllabus.

DEPARTMENT OF MARATHI

Marathi: Course Outcomes

Class	Course	Outcomes (Students able to do)
F.Y. B.Sc.	SEM I साहित्य सेतू	By the end of this course, the students will be able to CO1 विदयार्थ्यांनमध्ये साहित्य विषयक आवड निर्माण करणे CO2 वाचन संस्क्तीचा पुरस्कार करणे CO3 भारतीय संविधानाचे महत्व समजावून सांगणे CO4 मानवी मुल्यांची जपणूक करणे CO5 कविता लंखनाचे तंत्र अवगत करणे CO6 पर्यावरण विषयक जाग्ती निर्माण करणे CO7 व्यावहारीक मराठीचे महत्व समजावून सांगणे
	SEM I साहित्य सेतू	By the end of this course, the students will be able to CO1 संताचा मानवतावादी दष्टिकोण विदयार्थ्याना समजावून सांगणे CO2 राष्ट्रिय एकात्मता व अखंडता टिकवण्यासाठी विदयार्थ्यांना कार्यप्रवृत करणे CO3 नवकवितेचे तत्र अवगत करणे CO4 स्वातंत्र्योत्तर परिस्थीतीचे दर्शन घडवीने CO5 स्त्री समस्येला वाचा फोडणे, कृषि संस्क्तीबद्दल आपूलकी निर्माण करणे CO6 अनूवादाचे तंत्र अवगत करणे

Marathi: Program Outcomes

उदिष्टेः–

1. मराठी भाषेविषयी विदयार्थ्यांमध्ये अभिरुची निर्माण करणे.
2. साहित्यलेखनाची व वाचनाची आवड निर्माण करणे.
3. विदयार्थ्यांमध्ये असलेंल्या सुप्त कलांगुणांना वाव देऊन त्यांच्यात साहित्यविषयक वृध्दिंगत करणे.
4. साहित्यातून मानवतावादी दृष्टिकोण रुजविणे.
5. साहित्यातून समाजातील प्रश्नांना वाचा फोडून त्यांचे निराकरण करणे.

ध्येयः–

1. भावी काळात विदयार्थ्यांमधून साहित्यनिर्मिती करणे.
2. अध्यापन व अध्ययनात विदयार्थ्यांना सहभागी करुन संवादशील वातावरण निर्मिती करणे.
3. विभागात विविध उपक्रमांचे आयोजन करुन मराठी भाषेचा दर्जा वाढविणे.
4. विदयार्थ्यांमध्ये संशोधनवृत्ती वृध्दिंगत करणे.
5. मराठी भाषेची प्रयोगशाळा निर्माण करणे.

DEPARTMENT OF CHEMISTRY

Concept- A Bridge Course is a university-preparation course for newly admitted students with an academic curriculum that is offered to mature students as a means of preparing for the intellectual challenges in education at university level. Successful completion of Bridge Course helps students to compensate the gap between pre-university and university level curriculum. Bridge Course is a tool to help students succeed in their graduate level studies.

Necessity- It is primarily offered courses to students who need to improve their understanding in subjects that relate to particular study programmes. Bridge course is short, focused learning programmes designed to help junior college students to enter in higher education institutions.

AIMS AND OBJECTIVE-The main objective of the course is to bridge the gap between subjects studied at pre-university level and subjects they would be studying at under graduate level.

DURATION- 1 week (from 18/07/2022 to 25/07/2022)

DATE OF COMMENCEMENT- 18/07/2022.

Syllabus Bridged

Inorganic Chemistry

Unit I- Periodic table Periodic trends in properties of Elements - a) Atomic radius b) Ionization potential c) Electronegativity d) Ionic radius e) Density.

Organic Chemistry

Unit I- Some basic concept of Chemistry, Atomic and Molecular Structure, Periodic table and their properties, Solid State, Solution and Colligative Properties, Chemical Thermodynamics, Coordination Chemistry.

Unit II- Fundamentals in Organic Chemistry, Aliphatic (Alkanes Alkenes and Alkynes) and Aromatic Hydrocarbons, Alcohols Phenol and Amines, Introduction to Carbonyl and Carboxyl Chemistry, IUPAC nomenclature, Biomolecules, Chemistry in everyday life.

Physical Chemistry

Unit I- State of Matter 1. The three states of matter 2. Intermolecular interaction 3. Hydrogen bonding 4. The gaseous state 5. Boyle's law, Charles law. 6. Gay Lussac's law, Avogadro law 7. Kinetic theory - molecular speeds 8. Liquid state 9. Vapour pressure 10. Surface tension 11. Viscosity.

Report

Department of Chemistry conducted the 1-week bridge course from dated **18/07/2022 to 25/07/2022.**Summary of lectures conducted is given below

Summary of lectures conducted-

Lecture No.	Date	Syllabus Taught	Syllabus Bridge	No. of Students
Lecture 1	18/07/22	General trends in periodic table a) Atomic radius b) Ionization potential c) Electronegativity d) Ionic radius e) Density	**Inorganic Chemistry** **Unit I-** Periodic table & Periodic properties	18
Lecture 2	19/07/22	Some basic concept of Chemistry, Atomic and Molecular Structure, Periodic table and their properties,	**Organic Chemistry** **Unit I** Solid State, Solution and Colligative Properties,	15
Lecture 3	20/07/22	Aliphatic (Alkanes Alkenes and Alkynes) and Aromatic Hydrocarbons, Alcohols Phenol and Amines	**Unit II** Fundamentals in Organic Chemistry	14
Lecture4	21/07/22	Introduction to Carbonyl and Carboxyl Chemistry, IUPAC nomenclature, Biomolecules, Chemistry in everyday life.		12
Lecture 5	23/07/22	1.The three states of matter 2. Intermolecular interaction 3. Hydrogen bonding 4. The gaseous state	**Physical Chemistry** **Unit I** State of Matter	12
Lecture 6	25/07/22	5.Boyle's law, Charles law. 6. Gay Lussac's law, Avogadro law.		23
Lecture 7	25/07/22	7. Kinetic theory - molecular speeds 8. Liquid state 9. Vapour pressure 10. Surface tension 11. Viscosity.		23

DEPARTMENT OF PHYSICS

Concept- A Bridge Course is a university-preparation course for newly admitted students with an academic curriculum that is offered to mature students as a means of preparing for the intellectual challenges in education at university level. Successful completion of Bridge Course helps students to compensate the gap between Pre-University and University level curriculum. Bridge Course is a tool to help students succeed in their graduate level studies.

Necessity- It is primarily offered courses to students who need to improve their understanding in subjects that relate to particular study programmes. Bridge course is short, focused learning programmes designed to help junior college students to enter in higher education institutions.

AIMS and OBJECTIVE-The main objective of the course is to bridge the gap between subjects studied at Pre-University level and subjects they would be studying at under graduate level.

DURATION- 1 week (from 18/07/2022 to 25/07/2022)

DATE OF COMMENCEMENT- 18/07/2022.

SYLLABUS BRIDGED

PAPER-I

Elasticity, modulus of elasticity, viscosity, surface tension, Newtons laws of motion, moment of inertia, oscillation, simple harmonic motion, stationary waves, thermal properties of material, kinetic theory of gases.

PAPER-II

Electrostatics, Dielectrics, Electromagnetic Induction, Time Varying Field and Electric Current

REPORT-

Department of Physics conducted the 1-week Bridge Course from dated **18/07/2022 to 25/07/2022.** Summary of lectures conducted is given below

Summary of lectures conducted-

Lecture No.	Date	Syllabus Taught	Syllabus Bridge	No. of Students
Lecture 1	18/07/22	Units and Measurements	General Syllabus	05

Lecture 2	19/07/22	Laws of Motion, Inertia, Equations of Motion.	General Syllabus	06
Lecture 3	20/07/22	Properties of Matter, Basic of Elasticity	Unit-I (Paper-I)	05
Lecture 4	21/07/22	Viscosity and Surface Tension.	Unit-II and Unit III (Paper-I)	06
Lecture 5	23/07/22	Basic of Electrostatic and Dielectric	Unit-III (Paper-II)	06
Lecture 6	25/07/22	Basic of Electric Field and Electromagnetic Induction	Unit-III (Paper-II)	12
Lecture 7	25/07/22	Brief Revision	Unit-I and Unit-II	12

DEPARTMENT OF MATHEMATICS

A bridge course for newly admitted students is conducted every year before the commencement of the first semester classes

Concept-A B**ridge Course** is a university-preparation **course** with an academic curriculum that is offered to mature students as a means of preparing for the intellectual challenges of a university education, successful completion of which is recognized as a basis of admission to the University. **Bridge Course** is a tool to help students succeed in their graduate level studies.

Necessity – It is primarily offered courses to students who need to improve their understanding in subjects that relate to particular study programmes. **Bridge Courses** are short, focused learning programmes designed to help high school students to enter in higher education institutions. They will also be taught the connection between writing and thinking and how to use writing and reading for inquiry, learning, thinking and communicate in specific situations. They will be required to produce competent, professional writing through planning, drafting, revising and editing.

Objective

1) The main objective of the course is to bridge the gap between subjects studied at School/ Jr college level and subjects they would be studying in B.Sc. Graduation.
2) To make "learning of Mathematics as a pleasant experience".
3) To improve confidence of the slow learners to meet the knowledge requirements.
4) To prepare the new entrants for the intellectual challenges of a university education.

Duration - 1 week (from 18/07/2022 to 25/07/2022)

Commencement of Course – 18-July-2022.

Syllabus Bridged

I. Complex Number

Introduction of Complex Number - Fundamental Operations with complex number

Absolute Value - Properties of absolute value - Complex Conjugate - Properties of conjugate

Argand Diagram - Polar form - Argument

II. Matrices

Introduction of matrices - Types of matrices -Operations on matrices.

Properties of matrices – Applications of matrices -Determinants - Relation between matrices and determinants - Properties of determinants.

III. Differential Calculus

Limits and continuity - Concepts of continuity - Derivatives of a function - Differentiation rules - Derivatives of trigonometric function.

Chain rule - Techniques of differentiation - Total and partial derivatives.

IV. Integral calculus

Introduction of Indefinite and definite integrals- Properties of Indefinite and Definite Integrals-Proper and improper integrals-Applications of integration

Integration by Substitution - Integration by Parts - Integration by Partial Fraction

V. Differential Equations

ODE - PDE - Applications of ODE & PDE - Formation of ODE & PDE.

Order - Degree of differential equations-Applications of Differential equation

Linear & non linear - Homogeneous & non homogeneous equations.

Report

Department of Mathematics conducted the 1-week bridge course from dated **18/07/2022 to 25/07/2022.** Summary of lectures given

Summary of lectures conducted

Lecture No.	Date	Syllabus Taught	Syllabus Bridge	No. of students
Lecture 1	18/07/22	1. Introduction of Complex Number 2. Fundamental Operations with complex number 3. Absolute Value 4. Properties of absolute value	***Paper I*** **M-1: Elementary Mathematics** **Unit I-** Complex Numbers and Elementary Function	08
Lecture2	19/07/22	1. Complex Conjugate 2. Properties of conjugate 3. Argand Diagram 4. Polar form 5. Argument	***Paper I*** **M-1: Elementary Mathematics** **Unit I-** Complex Numbers and Elementary Function	09
Lecture3	20/07/22	1. Introduction of	***Paper I***	08

		matrices – 2. Types of matrices 3. Operations on matrices. 4. Properties of matrices 5. Applications of matrices	**M-1: Elementary Mathematics** **Unit II-** Matrices	
Lecture4	21/07/22	1. Limits and continuity 2. Concepts of continuity 3. Derivatives of a function 4. Differentiation rules	***Paper II*** **M-2: Differential and Integral Calculus** **Unit II**	08
Lecture5	22/07/22	1. Derivatives of trigonometric function. 2. Chain rule 3. Techniques of differentiation 4. Total and partial derivatives	***Paper II*** **M-2: Differential and Integral Calculus** **Unit II**	09
Lecture6	23/07/22	1. Introduction of Indefinite and definite integrals- 2. Properties of Indefinite and Definite Integrals- 3. Applications of integration	***Paper II*** **M-2: Differential and Integral Calculus** **Unit IV**	05
Lecture7	25/07/22	1. ODE - PDE – Applications of ODE & PDE 2. Formation of ODE & PDE. 3. Order - Degree of differential equations- Applications of Differential equation 4. Linear & non linear - Homogeneous & non homogeneous equations.	***Paper II*** **M-3: Geometry, Differential & Difference equation** **Unit III** **Second Order Linear Differential Equations**	11

DEPARTMENT OF ZOOLOGY

A bridge course for newly admitted students is conducted every year before the commencement of the first semester classes

Concept-A B**ridge Course** is a university-preparation **course** with an academic curriculum that is offered to mature students as a means of preparing for the intellectual challenges of a university education, successful completion of which is recognized as a basis of admission to the University. **Bridge Courses** are a tool to help students succeed in their graduate level studies.

***Necessity* –** It is primarily offered courses to students who need to improve their understanding in subjects that relate to particular study programmes. **Bridge Courses** are short, focused learning programmes designed to help high school students to enter in higher education institutions.

Objective

5) The main objective of the course is to bridge the gap between subjects studied at School/ Jr. college level and subjects they would be studying in B.Sc. Graduation.
6) To make "learning of Zoology as a pleasant experience".
7) To improve confidence of the slow learners to meet the knowledge requirements.
8) To prepare the new entrants for the intellectual challenges of a university education.

Duration - 1 week (from 18/07/2022 to 25/07/2022)

***Commencement of Course* –** 18-July-2022.

Syllabus Bridged

Unit I - Animal kingdom:

1.1. Phylum Porifera,

1.2. Phylum - Coelenterata (Cnidaria,)

1.3. Phylum Platyhelminthes, Phylum - Aschelminthes (Nemotoda),

1.4. Phylum - Annelida

Unit II- Environmental biology:

2.1. Biodiversity

2.2. Conservation of biodiversity

2.3. Causes of reduction of biodiversity

2.4. Pollution

Report

Department of Zoology conducted the 1-week bridge course from dated **18/07/2022 to 25/07/2022.** Summary of lectures given

Lecture No.	Date	Syllabus Taught	Syllabus Bridge	No. of students
Lecture 1	18/07/22	5. Introduction Zoology 6. Kingdom animalia 7. Chordates and non-chordates 8. Phylum- *Porifera*	***Paper I*** **Life and diversity of animals- non-Chordates** **Unit II-** *Porifera*	08
Lecture2	19/07/22	*6. Coelenterata*	**Life and diversity of animals- non-Chordates** **Unit II-** 2.3 *Coelenterata*	05
Lecture3	20/07/22	*6. Platyhelminthes* *7. Aschelminthes*	**Life and diversity of animals- non-Chordates** **Unit III-** 3.1 Helminthes	06
Lecture4	21/07/22	*5. Annelida*	**Life and diversity of animals- non-Chordates** **Unit IV-** 4.1 *Annelida*	09
Lecture5	22/07/22	5. Introduction to environmental science 6. Biodiversity	***Paper II*** **Environmental biology** **Unit III-** **3.1** Biodiversity	06
Lecture6	23/07/22	4. Conservation methods	***Paper II*** **Environmental biology** **Unit III-** **3.1** Biodiversity and its conservation	05
Lecture7	25/07/22	5. Causes of biodiversity loss.	***Paper II*** **Environmental biology** **Unit III-** 3.2 Causes of reduction of biodiversity	10

Summary of lectures conducted

DEPARTMENT OF BOTANY

INTRODUCTION:

Any study that involves Plants as its primary focus can be considered a part of Botany. Botany is the branch which deals with the study of the plant kingdom, its classification, habits and habitats, living and extinct, Morphology, Physiology, Embryology, Anatomy, Cytology, Genetics, Histology, Neonatology, Taxonomy and evolution.

Although familiar with subject Botany the entire syllabus of B.Sc. Botany deals with new terms and topics which will be a problem for students coming from 12" class to understand in one stoke. So to revise, update and groom students with basics in Theory and Practicals a Bridge Course of Botany subject is organized by Asst. Prof. Darshana S. Dhamdar, Department of Botany, Bhiwapur Mahavidyalaya, Bhiwapur.

OBJECTIVE:

- To revise the basics of Botany subject and to introduce new topics and syllabus of B.Sc. I, Botany so that students get familiar with the terms which will be used during regular classes.
- To understand the fundamentals of the sub disciplines in Biology including Taxonomy, Cell and Molecular Biology, Genetics, Physiology, Biodiversity, Ecology and Applied Botany.
- To understand basic methods and aims of the Science of Biology.
- To make Students able to demonstrate proficiency in the experimental techniques and methods of analysis appropriate for their area of Specialization within Biology.
- To make students able to relate the Physical features of the environment to the structure of populations, communities, and Ecosystems.
- To make students able to identify the major groups of organisms with an emphasis on Plants and be able to classify them within a Phylogenetic Framework. ,
- To make students able to compare and contrast the characteristics of Plants that differentiates them from other forms of life.
- To develop students' Practical Biological skills.

Duration-One week
Contact Hours
Beneficiaries B.Sc. I.
Subject-Botany

SYLLABUS

Unit I -

What is Botany – Concept, meaning, Father of Botany, different Botanist & their work, Indian Botanist, evolution of Plants?

Systematic Botany – Concept of classification, How to write classification system, plant classification (5 kingdom System of classification), Important characters.

Unit II

Plant body – Introduction of Morphology, Introduction of Botanical terms & taxonomic terms, Economic importance of plant.

Unit III

Viruses and prokaryotes –Difference between prokaryotic cell and Eukaryotic cell, General characteristics of Viruses, Types of Viruses, Economic importance of Viruses.

MATERIALS AND METHODS

- A screen to show the video and copies of the What is Botany? - Definition, Branches, & Tools lesson
- Student computers
- Text books for reference — theory and practical purpose
- Practical materials

OUTCOMES:

At the end of the course learning outcomes will be:

- The student has an enhanced knowledge and appreciation of topics related to Botany subject.
- Be able to develop interest and will be confident to perform in examination.
- Students have been familiar with basic Botany
- Be able to integrate related topics from separate parts of the course.
- Able to Place biological knowledge in context and show an understanding of the way biologists think and of the historical development of biological thought.
- Demonstrate the ability to connect and apply biological knowledge to other disciplines and to integrate knowledge into their personal and professional lives;
- Demonstrate the ability to engage in critical, independent, and creative thinking; and
- Demonstrate proficiency in writing and speaking about biological concepts and research.

DEPARTMENT OF BACHELOR OF VOCATION (B.VOC)

HARDWARE TECHNOLOGY AND NETWORKING

Introduction: This course will help the students become Field Technician (Computing and Peripherals) and Hardware and Network Engineers/Administrator who are employed in software, hardware and networking servicing firms like telecom companies and equipment manufacturing firms. This course will give hand on training to the student considering that student gets an early platform to manage and figure out the complex failures of computer hardware and network and also manage to find a solution to make it work properly. The curriculum includes general education and skill development components having extensive practical and on-the job training along with periodic industrial visits and industry interactions.

Objectives of the Course:

1. Study the basic network and terminology of the computer networking and enumerate the layers of system computer.
2. The application of open system interconnection network sysytem paradigms and protocols implemented services.
3. The knowledge of Network layer and services managing to generation routing protocols and IP addressing.
4. The course aims at considering gets an early platform to manage and figure out the complex failures of computer hardware and network and also manage to find a solution to make it work properly

Duration: One week

Contact Hours: Two hours per day

Subjects: Relevant subjects of 1st year

Syllabus:

Unit-1:

- Computer Fundamentals: Characteristics and Classification of computer, Generation of computer, Functional Block Diagram of Computer
- Input and Output Devices, Monitor, BIOS, POST
- Booting, how system starts its day.

Unit-2:

- Memory Management: Memory Static & dynamic, RAM, ROM, PROM, EPROM, EEPROM, flash and Cache.
- Storage Devices: Hard Disk, its working physical and logical techniques, Zip Disk and Optical Disk. Pen Drive, Blue Ray.

- File systems FAT, NTFS, Types of Files, Organization of Files, Data Processing. Factors affecting File Organization, Partition, Format concept and its practical implementation.
- Number system- Binary, Octal, Hexadecimal, their Conversions.
- **Unit-3**
- Input and output Devices: Mother Board, Study of different inputs, connectors, slots & cables.
- Computer form factors of M.B. Computer.
- Hardware and Software Various types of Peripherals and their specifications.
- CD-ROM Drive, Zip Drive, MODEMS, Ethernet Card, printers working (Inkjet & Laser) and installation.

Unit-4

- Operating System: Types and Functions, DOS Introduction, Versions, DOS Commands.
- Internal, External, Root Directory.
- Windows Introduction, Working with desktop, Control Panel settings.

Methodology; The methodology adopted for teaching the course are as follows:

- Reference books
- Power Point Presentation
- Practical with respect to company
- Online Site visits
- Guest lecturers from imminent personalities of the industry

Conclusion: B. Voc in Hardware Technology and Networking is a skilled orientated course which focuses on overall development of the students with respect to practical as well as theoretical knowledge. It helps the students to learn about recent practices and work culture in the industry. This course also increases the employability of the students being a technical course.

BUILDING TECHNOLOGY

Introduction: Construction activity is an integral part of nation's infrastructure and industrial development. Construction industry is vital in socio-economic development and also generates substantial employment and provides a growth impetus to other sectors through backward and forward linkages. Building technology deals with design, construction and maintenance of hospitals, schools, townships, offices, houses and other buildings. Requirement of skilled personnel/technicians in construction engineering works is growing day by day. Construction industries, public and private entrepreneurs, government organizations, builders, real estate owners are in need of technicians in this area. Hence this course has various advantages that will enable student to get engaged in any civil engineering work area.

Objectives of the Course:

5. The B. Voc in Building technology aims at providing the expertise needed to effectively lead a construction project and work in industry.
6. It aims at providing over all technical proficiency, the industrial working exposure and the entrepreneurial skills for success in this everlasting industry.
7. The curriculum teaches you how to integrate multiple professional requirements for bringing construction projects to successful completion, including building construction, planning and drafting, estimating, cost control, new technologies etc.
8. The course aims at managing various types of contractual relationships governing the owner, the contractors, sub-contractors, consultants and architects as well as essential skills of bidding, negotiating handling disputes and claims.
9. To train students to gear up for employment opportunities in construction industry in private and public sector, state and central PWD, Government undertakings, self-employment ventures/civil engineering contractors etc.

Duration: One week

Contact Hours: Two hours per day

Subjects: Relevant subjects of 1st year

Syllabus:

Unit-1

- General Introduction of civil engineering: Various disciplines of civil engineering, Relevance of civil engineering in the overall infrastructural development of the country.
- Introduction to various types of buildings as per NBC
- Components of residential building and their functions

Unit-2

- Building Planning: Introduction to planning of a residential building, site plan, orientation of a building, Position of building, position of doors and windows, size of rooms, preparation of a scaled sketch of the plan of a single storeyed residential building.

Unit-3

- Building materials: Brick, cement blocks, properties and specifications
- Cement-OPC properties, types of cement and its uses
- Cement mortar- Constituents, Preparation
- Concrete- PCC and RCC, grades
- Steel- Use of steel in building construction, types of steel , grades and market forms

Unit-4

- Building construction: Foundations, Function of foundations, types of foundations
- Brick Masonry
- Roofs- Functions, types, roofing materials
- Floors- Function, types, flooring materials
- Paints & Paintings- Function, types, painting materials

Unit-5

- Basic units and conversions in civil engineering
- Introduction to various temporary structures in building construction
- Types of temporary structures
- Functions of temporary structures

Methodology The methodology adopted for teaching the course are as follows:

- Reference books
- Power Point Presentation
- Practical with respect to industries
- Site visits
- Guest lectures from imminent personalities of the industry

Conclusion- B. Voc in building Technology is a skilled orientated course which focuses on overall development of the students with respect to practical as well as theoretical knowledge. It helps the students to learn about recent practices and work culture in the industry. This course also increases the employability of the students being a technical course.

SOFT SKILL

Introduction

About the computer fundamental and the basics of the computer, its various hardware, software.

Objectives

- To Study the basic awareness of computer
- To Study about the programming skill

Duration – One week

Contact Hours – as per the schedule (Time Table)

Beneficiaries –B. Voc-Software Development

Subject – Relevant Subjects of First Year- Computer Fundamental, C-Programming

Syllabus

Unit -1 Basics of Computer, Block Diagram of Computer

Unit -2 Input Devices, Output Devices

Unit -3 DOS

Unit -4 C- Programming Languages Basics

Methodology

Online Teaching, Online Practical's on Computer.

Conclusion

Student will study all the basic of computer and basic of computer programming languages.

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JOBI GEORGE

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