

DDU KAUSHAL
Kendra by University
Grants Commission

Biotechnology
Capacity Building
Cell” (BT-CBC)
DST, Govt. of Gujarat

Centre for **Soil**
Testing (Macro and
Micronutrient
Analysis) by
Govt. of India

SSIP
(Student Start-Up and
Innovation Policy)
Cell,
Govt. of Gujarat

SCOPE (Society for
Creation of Opportu-
nities through Profi-
ciency in English) &
Finishing School by
Govt. of Gujarat

Sarva Vidyalaya Kelavani Mandal, Kadi, managed

PRAMUKH SWAMI SCIENCE & H. D. PATEL ARTS COLLEGE, KADI

**College with Potential for Excellence, phase-I & II (2010-2019)
AAA Rank-1 by Govt. of Gujarat**

Bridge Courses



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Pramukh Swami Science and H.D.Patel Arts College, Kadi.
Community College
Bridge course- Agriculture and Soil Science (AS-Bridge)
Department of Agriculture and Soil Science

Bridge course is advanced **course** designed especially for students taking an advanced **course** for the first time. These **courses** offer more attention to Agriculture and Soil Science and also Computer. Most of students come from Gujarati medium.

The aim of this course is to give those students background from arts and commerce faculty, its give chance to upgrade knowledge, while at the same time enabling them to adapt their studies to the requirements of their other commitments. The course is a combination of subjective as well as motivational. Campus-based classes are held at Department of **Agriculture and Soil Science** once every two weeks. There will also be a number of additional sessions for subject evaluation purposes.

Unit	Syllabus
I	<p>Introduction of Agriculture:</p> <ul style="list-style-type: none"> • What is Agriculture • Importance of Agriculture • Scope of Agriculture • Branches of Agriculture • Identification of field crops • Study of tillage implements • Study of Seeding equipments • And practical knowledge
II	<p>Introduction of Soil Science</p> <ul style="list-style-type: none"> • Classification of soil • Soil Morphology • Soil formation • Soil Sampling • Determination of pH • Determination of EC • Determination of organic C and Total N • Determination of N, P, K, and S in plant • Identification of fertilizer and their nutrient content • And practical knowledge
III	<p>Introduction of Botany</p> <ul style="list-style-type: none"> • Branches of Botany • Morphology of plants

	<ul style="list-style-type: none"> • History of botany • Classification and important of economic plants • Study of floral anatomy and study of various parts <p>And practical knowledge</p>
IV	<ul style="list-style-type: none"> • Irrigation management • Different methods of irrigation • Irrigation quality of water and its management • Calculation of irrigation water requirement • Insect pest management • Pant disease management • Agronomy of field crops (Rabi and Kharif Crops) • Weed Management • Seed production technology • Fundament of horticulture • Study of Different propagation technique • Importance of organic farming • Preparation of different organic fertilizers and pesticides • Importance of Plant breeding • Scope of plant breeding • Different breeding technology <p>And practical knowledge</p>

Number of students enrolled in bridge course (CT-Bridge)

Sr. No.	Academic Year	No. of students
1	2014-15	28
2	2015-16	42
3	2016-17	33
4	2017-18	11

Pramukh Swami Science and H.D.Patel Arts College, Kadi.
Community College
Bridge course- Ceramic Technology (CT-Bridge)
Department of Ceramic Technology

Bridge course is advanced course designed especially for students taking an advanced course for the first time. These courses offer more attention to **Ceramic**, chemistry and also English. Most of students come from Gujarati medium.

The aim of this course is to give those students background from arts and commerce faculty, its give chance to upgrade knowledge, while at the same time enabling them to adapt their studies to the requirements of their other commitments. The course is a combination of subjective as well as motivational. Campus-based classes are held at Department of **Ceramic Technology** once every two weeks. There will also be a number of additional sessions for subject evaluation purposes.

Unit	Syllabus
I	<p>Introduction of Ceramic –</p> <ul style="list-style-type: none"> • What is Ceramic, • Birth of Ceramic, • History of Ceramic, • Developments of Ceramics, • Classification of Ceramic • Classification of Raw Materials • Specials Materials and Chemicals. • Plaster of Paris • Winning of Clay • Machineries of mining • Raw Materials Testing • Ceramic Bodies • Auxiliary Raw Materials • Properties of Clay Materials • Slip House • Dehydration (Process Before Shaping) • Action of Heat on Raw Materials • Classification of Ceramics Refectories • And practical knowledge
II	<p>Introduction of Chemistry</p> <ul style="list-style-type: none"> • Basic Concept of Chemistry • Structure of Atoms and Chemical Bonding

II	<ul style="list-style-type: none"> • Ores and minerals - Sources from earth, living system and in sea –water • Chemistry of Ceramics Materials • Solution • Solid State • General Principles and Process of Isolation of Metal • Surface chemistry • And practical knowledge
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Number of students enrolled in bridge course (CT-Bridge)

Sr. No.	Academic Year	No. of students
1	2015-16	31
2	2016-17	32
3	2017-18	23

Bridge course- Biotechnology (BT-Bridge)

Department of Biotechnology

Bridge course is advanced **course** designed especially for students taking an advanced **course** for the first time. These **courses** offer more attention to biotechnology, biology chemistry and English. Most of students come from Gujarati medium.

The aim of this course is to give those students background from mathematic and biology, it's give chance to upgrade knowledge, while at the same time enabling them to adapt their studies to the requirements of their other commitments. The course is a combination of subjective as well as motivational. Campus-based classes are held at Department of biotechnology once every two weeks. There will also be a number of additional sessions for subject evaluation purposes.

Unit	Syllabus
I	<p>Origin of life on Earth - The theory of Extraterrestrial contact - import of life through meteorites. Theory of Chemical Evolution, Primitive Earth Conditions - anoxic reductive atmosphere, relatively high temperature, Volcanic eruption, radioactivity, high frequency UV radiation.</p> <p>Basics of Cell Biology (structure & function) – Discovery of cell and Cell Theory; Comparison between plant and animal cells; Cell wall; Plasma membrane; Modification of plasma membrane and intracellular junctions; Cytoskeleton; Protoplasm; Mitochondria; Chloroplast; ER; Golgi complex; Lysosome, endosome and microbodies; Ribosome; Centriole; Nucleus;</p>
II	<p>Common Mechanisms in Biological Chemistry – Overview of Digestion, Absorption, Metabolism (Anabolism & Catabolism), Nutrition, Photosynthesis, Respiration, Excretion.</p> <p>Office operation Microsoft word:- concept of toolbar ,character ,paragraph& document formatting, drawing tool bar , header ,footer ,document editing ,page setup, short cut keys, text & graphics.</p> <p>Microsoft excel:- concept of spread sheets, creating worksheet ,well formatted documents, concept of row , column ,cell &formula bar, using function ,using shortcuts ,chart, conditional formatting, goal seek ,validation rule.</p> <p>Microsoft power point :- slide presentation, slide layout & design , custom animation, image importing ,slide transition</p>

Number of students enrolled in bridge course (BT-Bridge)

Sr. No.	Academic Year	No. of students
1	2013-14	39
2	2014-15	52
3	2015-16	40
4	2016-17	31
5	2017-18	54

Bridge course - Pharmaceutical chemistry

Bridge course is advanced **course** designed especially for students taking an advanced **course** for the first time. These **courses** offer more attention to pharmaceutical technology, biology, chemistry and English. Most of students come from Gujarati medium.

The aim of this course is to give those students background from mathematic and biology, it's give chance to upgrade knowledge, while at the same time enabling them to adapt their studies to the requirements of their other commitments. The course is a combination of subjective as well as motivational. Campus-based classes are held at Department of Pharmaceutical chemistry. once every two weeks. There will also be a number of additional sessions for subject evaluation purposes.

Unit	Syllabus
I	<p>Meaning of Bachelor of Vocation.</p> <p>Introduction of Pharmaceutical chemistry- Different pharmaceutical calculation: Normality, Molarity, % W/W, % W/V, Dilution, ppm, ppb, etc, Determination of Molecular weight, density & Surface tension. Accuracy & determination.</p> <p>Basics of Human Anatomy and Physiology: structure & function Cell & tissue, Comparison between plant and animal cells; Cell wall, Cardiovascular System, Gastro-intestinal system & Immuno system, Circulatory System & Respiratory System</p>
II	<p>Pharmaceutics (Basic Principle)-Dosage Form: Types, Excipients, API, Tablet, Capsule, Liquid dosage form- suspension, Emulsion, Syrup, etc. Parenteral & Topical Dosage Form.</p> <p>Pharmaceutics- Unit Operation: Different Technology- Size Reduction, Size Separation, Distillation, Crystallization, Filtration & Sterilization, etc</p> <p>Computer Application: Microsoft word, Microsoft excel, Microsoft power point & Internet</p> <p>Drug Regulatory Guideline: GMP, GLP, NDA, IND, WHO, SOP, ISO, Method Validation Parameter, Audit, TQM.</p>

Number of students enrolled in bridge course

Sr. No.	Academic Year	No. of students
1	2014-15	17
2	2015-16	24
3	2016-17	17
4	2017-18	17

Pramukh Swami Science and H.D.Patel Arts College, Kadi.
Bachelor of Vocation & Community College
Bridge course- Textile and Ginning Technology (TGT-Bridge)
Department of Textile and Ginning Technology

Bridge course is an advanced **course** designed especially for students taking an advanced **course** for the first time. These **courses** offer more attention to **Textile**, especially in subject of Ginning, Spinning and communication Skill. Most of the students come from Gujarati medium.

The aim of this course is to give those students background from arts and commerce faculty, it's give chance to upgrade knowledge, while at the same time enabling them to adapt their studies to the requirements of their other commitments. The course is a combination of subjective as well as motivational. This course is providing information about requirement of skill in industry.

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Unit 1:

1	Information About Bachelor Of Vocation and Community College
2	Requirement Of Skill Manpower & Demand Of Industry
3	Skill Requirement In Textile Sector
4	Basic Information About Textile And Ginning Technology
5	Information About Different Fitting Tools
6	Information About Different Equipments Used In Electrical Wiring
7	Safety Requirement In Industry

Unit 2:

1	Information About Cotton Fibre & Its Properties
2	Different Machinery used in Ginning Industry
3	Why Skill Manpower required in Ginning Industry
4	Information About Spinning Process
5	Different Machinery used in Spinning Industry
6	Why Skill Manpower required in Ginning Industry
7	Different Machinery Used in Spinning Industry

Number of students enrolled in bridge course (TGT-Bridge)

Sr. No.	Academic Year	No. of students
1	2014-15	43
2	2015-16	63
3	2016-17	57
4	2017-18	18