

DBT Star College Scheme - List of Projects undertaken by students

List of Projects undertaken by students in Session 2014-2015
List of Projects undertaken by students in Department of Biotechnology

	Title of Project
1	To study the differences in the BMI (Body Mass Index) of class population.
2	Isolation of micro-organisms from hands
3	Purification of proteins by SDS PAGE
4	Isolation of bacteria from soil
5	Separation of Proteins by Affinity column chromatography
6	Separation of plasma from blood
7	Determination of blood groups
8	Bacterial measurement using Microscopic techniques
9	Isolation of mononuclear cells
10	Medicinal Value of Plants
11	Isolation and characterization of proteins from legumes using sds-page
12	Digestion of DNA with restriction enzymes.
13	Isolation of micro-organism from cold drink and its impact on human health.
14	Isolation of bacterial envelope proteins.
15	Placebo Therapy (Survey report).
16	Biochemical study and immobilization of microbes present in a sample collected from various sources.
17	Steroids and its effects.

List of Projects undertaken by students in Department of Botany
Session 2014-2015

1. The effect of chromium (Cr-VI) on growth of *Triticum aestivum* seedlings with and without nitric oxide'
2. Vermicomposting
3. The study of different pollination types found in plants of DAV College Campus
4. The study of different types of Inflorescence found in the plants of DAV Campus
5. Algal Diversity in the Vicinity of DAV College, Jalandhar
6. Study of different types of stellar system found in some Pteridophytes
7. Study of Peristomial Teeth in *Funaria* and *Polytrichum*
8. Study of fruit diversity in plants of DAV Campus, Jalandhar
9. Digitalization of vegetative and reproductive structures of members of Asteraceae family found growing in DAV Campus and surrounding areas
10. Effect of Colchicine on Chromosome of *Allium cepa*.'

**List of Projects undertaken by students in Department of Food Science & Technology
Session 2014-2015**

TITLE OF PROJECT
Production, analysis and organoleptic evaluation of Soy based product
Organoleptic properties of Vermicelli containing Apple Pomace
Physiochemical evaluation of processed Amla product
Preparation and standardization of Jamun RTS supplemented with Amla and Bael Juice
Preparation of different types of Ice Cream
Preparation of Amla Candy
Preparation and evaluation of Rose Wine
Preparation of rice flour and buckwheat flour cookies

List of Projects undertaken by students in Department of Physics
Session 2014-2015

Title of Project
Study of Variation of Refractive Index of Thin Film with Wavelength
Measurement of Rn222/Rn220 Daughter Products using DRPS/DTPS
Deposition of Thin Films and Determination of Band Gap using Absorption Spectroscopy
Measurement of Radon/Thoron in Air using Passive Technique
Natural Radiation Dose and its Health Hazards for Humans

DAV COLLEGE JALANDHAR

List of Projects undertaken by students in Department of Chemistry
Session 2014-2015

<ul style="list-style-type: none">• Crossed Aldol Condensation reaction of P-methoxy Benzaldehyde with Acetone, P-methoxy Benzaldehyde with cyclopentanone and P-methoxy Benzaldehyde with cyclohexanone. (comparison of IR Spectra and NMR of reactants and products.),
<ul style="list-style-type: none">• Hardness in drinking water in various areas of Jalandhar,
<ul style="list-style-type: none">• Spectral analysis (NMR, FTIR and UV-Vis) of some organic compounds .
<ul style="list-style-type: none">• Crossed Aldol Condensation reaction of Benzaldehyde with Acetone, Benzaldehyde with cyclopentanone and Benzaldehyde with cyclohexanone. (comparison of IR Spectra and NMR of reactants and products.)
<ul style="list-style-type: none">• Crossed Aldol Condensation reaction of P-methyl Benzaldehyde with Acetone, P-methyl Benzaldehyde with cyclopentanone and P-methyl Benzaldehyde with cyclohexanone. (comparison of IR Spectra and NMR of reactants and products.)
<ul style="list-style-type: none">• Grafting of Acrylic acid onto cellulose by free radical initiation method and sorption of Fe(II), Cu(II) and Cr(VI) ions onto graft copolymers.
<ul style="list-style-type: none">• Evaluation of optimum Grafting conditions for grafting of Hydroxy ethyl methacrylate onto chitosan by free radical initiation method and swelling properties of graft copolymers.
<ul style="list-style-type: none">• Chitosan based graft copolymers for controlled release of diclofenac sodium.
<ul style="list-style-type: none">• Grafting of Acrylamide onto cellulose for their applications in sorption of Pb(II) and Cr(VI) ions onto graft copolymers
<ul style="list-style-type: none">• Sorption of Cu(II) and Fe(II) ions onto chitosan based hydrogels.
<ul style="list-style-type: none">• Grafting of NIPAM onto Dextrin for metal ion sorption studies.

**List of Projects undertaken by students Department of Zoology
Session 2014-2015**

1. Biochemical studies of amino acids from the haemolymph of *Pieris brassicae* (Lepidoptera). - Ruchi Sen
2. Biochemical studies of amino acids from the haemolymph of *Danaus crissipus* (Lepidoptera). – Shikha
3. Characterisation of butterfly species *Danaus crysippus* by restriction digestion and southern blotting method. - Ravneet Kaur
4. Characterisation of some butterflies on the basis of Morphotaxonomy – Sabreena
5. Butterflies of Jalandhar : genitalia based characterisation of some *Danaids* and *Papilionids* - Shazia.
6. To check the quality of water with special reference to Coliform bacteria. – Savvi Khanna.
7. Characterisation of butterfly species *Pieris brassicae* by restriction digestion and southern blotting method. – Neeru Sethi
8. To study occurrence of Brucellosis in dairy animals – Joban preet
9. Foot and mouth disease – ELISA – Suneeta
10. To study various bioinformatic tools for sequence similarity searching, data retrieval and deposition.

List of Projects undertaken by students Session 2013-2014

Title of Project	Department	Name of Student & Class
Effect of aqueous extracts of <i>Acalypha indica</i> on seed germination of wheat	Botany	Anu Mahajan & Jyoti of B.Sc. III (Medical).
Microscopic analysis of structure of pollen grains of <i>Hibiscus rosa sinensis</i> and <i>Urena lobata</i> (Family Malvaceae).	Botany	Sunita Suman and Simardeep Kaur of B.Sc. II (Medical)
Microscopic examination of different type of vascular bundles in Angiosperms	Botany	Rohit of B.Sc. I (Medical)
Determination of stomatal index in leaves of <i>Tradescantia</i>	Botany	Kamalpreet Kaur of B.Sc. II (Medical)
Use of FTIR of pollen grains as qualitative marker of different species of malvaceae	Botany	Kamalpreet Kaur and Arshdeep Kaur of B.Sc. III (Medical)
Nomenclature of plants in DAV Campus helped plants improving their skills on plant taxonomy	Botany	B.Sc. III Medical Students
Check List of butterfly fauna in urban and sub-urban areas of jalandhar.	Zoology	B.Sc. II Medical Students Jobanpreet singh
Geochemical Control on Selenium occurrence in the Environment: Dietary balancing between deficiency and Toxicity.	Zoology	B.Sc. II Medical Students Abhilasha, Dolly
Characterization of Butterfly species by Molecular Techniques.	Zoology	B.Sc. II Medical Students Manohrma. Ravia
Biochemical study of free amino acids from haemolymph of butterflies.	Zoology	B.Sc. III Medical Students Heena, Sonakshi, Manisha
Collection and classification of local fauna & flora	Zoology & Botany	B. Sc. III
Students of +1, +2 and Graduation have under taken various project which were shown in the Science Fair organized by College on 29-30 January 2014 details are given below.		

List of Projects undertaken by students Session 2013-2014

Title of Project	Department
Blood group testing of college students	Zoology
Collection and identification of insect species in surroundings of college	Zoology
Collection of data of genetic disease in the area	Zoology
Study of Phenotypic character study in college.	Zoology
Vermicomposting in college hostel	Zoology
Adulteration in food materials	Food Sci. & Tech.
Milk and water testing	Food Sci. & Tech.
Hardness in drinking water in various areas of Jalandhar	Chemistry
Spectral analysis (NMR, FTIR and UV-Vis) of some organic compounds	Chemistry
Free radical initiated grafting of Acrylic acid on to Guar Gum	Chemistry
Synthesis and characterization of graft copolymers of N-isopropyl Acrylamide on to guar gum	Chemistry
Swelling study of graft copolymers	Chemistry
Immobilization of protease by guar gum based hydrogels	Chemistry
Analysis of drinking water samples for salinity, conductivity, TDS and pH.	Physics
Preparation of thin films by vacuum evaporation and optical characterization.	Physics
Preparation of synthetic seeds	Bio-technology
Identification of microbes from local water bodies.	Bio-technology
Calculation of lipid profile in students of bio-technology department.	Bio-technology
Rstriction mapping of DNA isolated from blood samples of students of bio-tech dept.	Bio-technology
Stastitcal analysis of WBC, RBC and DLC count of students of bio-tech deptt.	Bio-technology
Allelopathic impact of <i>Thevetia</i> on germination of wheat	Botany
Microscopic alterations induced by <i>Thevetia</i> on wheat roots	Botany
Allelopathic impact of <i>Thevetia</i> leaf extracts on root anatomy of Maize	Botany
Nomenclature of plants in DAV Campus	Botany

List of Projects undertaken by students Session 2012-13

Title of Project	Department
Allelopathic impact of <i>Thevetia</i> on germination of wheat	Botany
Microscopic alterations induced by <i>Thevetia</i> on wheat roots	Botany
Allelopathic impact of <i>Thevetia</i> leaf extracts on root anatomy of Maize	Botany
Nomenclature of plants in DAV Campus helped plants improving their skills on plant taxonomy	Botany
Collection and classification of local fauna & flora	Zoology & Botany
Spectral analysis (NMR, FTIR and UV-Vis) of some organic compounds	Chemistry
Grafting of Acrylamide acid on to Dextrin	Chemistry
Characterization of cellulose based graft copolymers	Chemistry
Immobilization of BSA by cellulose based hydrogels	Chemistry
Study of Variation of Refractive Index of Thin Film with Wavelength	Physics
Deep freezing of peas	Food Sci. & Technology