

AMAR SHAHEED BABA AJIT SINGH JUJHAR SINGH MEMORIAL COLLEGE BELA ROPAR PUNAJB



DESCRIPTION OF PROGRAMME OUTCOMES

NAME OF THE DEAPRTMENT: Biotechnology& Food Processing

NAME OF THE PROGRAMME: B.Voc. Food Processing

P.O. No.	Description of Programme Outcome	Domain as per Bloom's Taxonomy	Level of Bloom Taxonomy*
PO-1	Develop skills to learning, selecting and applying appropriate methods, procedures, resources, tools and machineries	psychomotor	1,2,3,4,5,6.
PO-2	Define and discuss standards of industrial performance	Cognitive	1,2
PO-3	Explain and evaluate the production processes for various processed foods	Cognitive	1,2,3,4,5,6
PO-4	Identify and evaluate problems, and demonstrate effective analysis by applying principles of basic sciences, and engineering.	psychomotor	1,2,3,4,5,6

PO-5	Apply critical thinking and sound reasoning via management of resources like time, money and energy.	Affective	1,2,3,4,5,6
PO-6	Analyze, design and develop processes/products that are technically feasible, economically viable and socially relevant	psychomotor	1,2,3,4,5
PO-7	Draft clear and well structured reports, presentations and documents.	psychomotor	1,2,3,4,5,6
PO-8	Discuss theoretical foundations and practical applications using precise terminology, valid and reliable evidence.	Affective	1,2,3,4,5,6
PO-9	Plan, organize, and execute a project or new venture with the goal of bringing new products and service to the market	psychomotor	1,2,3,4,5,6
PO-10	Develop international standards through significant industry involvement.	psychomotor	1,2,3,4,5
PO-11/ PSO1	Develop skills for operating various types of dairy processing machineries for producing dairy products.	psychomotor	1,2,3,4,5
PO-12/ PSO2	Explain and performs various packaging functions and handles all categories of packaging such as primary, secondary and tertiary packaging for food products.	psychomotor	1,2,3,4,5,6
PO-13/ PSO3	Plan, design and carry out milling process for all types of grains,	Psychomotor	1,2,3,4,5,6

	maintenance of process parameters, inspection of raw material and finished goods to achieve the desired quality and quantity of products while maintaining food safety and hygiene in the work environment.		
PO-14/ PSO4	Planning, coordinating and controlling production process to achieve quantity and quality products, reviewing production process to minimize production cost and optimizing production.	psychomotor	1,2,3,4,5,6
PO-15/ PSO5	Critically analyze research processes, products and practices with a view to introduce a new product in the market.	psychomotor	1,2,3,4,5,6

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DESCRIPTION OF COURSE OUTCOMES

NAME OF THE DEAPRTMENT: **Biotechnology and Food Processing**

NAME OF THE PROGRAMME: **B.Voc. Food Processing (B.VFP 214)**

NAME OF COURSE: **Introduction to Food Microbiology**

NAME OF FACULTY: **Parminder Kaur**

C.O. No.	Description of Course Outcome	Method/s of Assessment
CO-1	Describe Food microbiology, important terms, Safety regulations for food microbiology.	Group discussion, Presentation, Exam.
CO-2	Enlist the types of microorganisms, classification and nomenclature of micro organisms, structure & functions .	Exams, Class test, Presentation, Assignments.
CO-3	Demonstrate microscopy ant its uses.	Exams, Class test, Presentation, viva

CO-4	Discuss microbial growth in food, Characteristics, bacterial growth curve ,.	Exams, Class test, Presentation, Group discussion
CO-5	Define cultivation of microorganisms , methods, techniques, Hygienic handling of food.	Exams, Class test, Presentation
CO-6	Explain sources of microorganisms in food, food spoilage bacteria	Presentation, Seminar, Class test, viva.

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DESCRIPTION OF COURSE OUTCOMES

NAME OF THE DEAPRTMENT: **Biotechnology and Food Processing**

NAME OF THE PROGRAMME: **B.Voc. Food Processing (B.VFP 214)**

NAME OF COURSE: **Practical Pertaining theory B.VFP 214**

NAME OF FACULTY: **Parminder Kaur**

C.O. No.	Description of Course Outcome	Method/s of Assessment
CO-1	Introduce Food microbiology & Lab safety.	Lab Work
CO-2	Practice the use of laminar air flow, microscope, Autoclave.	Lab Work
CO-3	Perform Cultivation of microbes.	Lab Work

CO-4	Prepare slant ,media plates, slides oh bacteria.	Lab Work
CO-5	Demonstrate plate count methods .	Lab Work
CO-6	Practice and demonstrate various staining, microbial growth curve.	Lab Work

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DESCRIPTION OF COURSE OUTCOMES

NAME OF THE DEAPRTMENT: **Biotechnology and Food Processing**

NAME OF THE PROGRAMME: **B.voc Food processing**

NAME OF COURSE: **Practcal pertaining to Introduction to grain milling and machineries(BVFP-312)**

NAME OF FACULTY: **Parneet Kaur**

C.O. No.	Description of Course Outcome	Method/s of Assessment
CO-1	Demonstrate general principle of milling of Wheat through industrial visit.	Exams, Oral Exams, Quizzes, Home Assignments
CO-2	Identify adultration in wheat flour by NaHCo3 method.	Virtual lab

CO-3	Calculate alcoholic acidity in given sample of flour	Virtual lab
CO-4	Identify Moisture content in wheat flour	Virtual lab
CO-5	Estimate ash value in given flour sample.	Virtual lab
CO-6	Demonstrate different types of mills used in grain milling process.	Exams, Oral Exams, Quizzes, Home Assignments

Discription of Outcomes

Name of the Department: Bio Technology

Name of the Programme: : Punjabi (Compulsory)

Name of Course: B.Voc.(food processing) 1st sem

Name of Faculty: Dr. Surjeet Kaur

C.O. No.	Description Of Course Outcomes	Method/s Of Assessments
CO-1	isiKAwrQI khwxIAW dw AiDAYn krn dy nwl izMdgI dIAWloVW qy mjbUrIAW nUM smJx dy smr`Q ho jWdw hY[jmwqI tYst,AwpsI ivcwr vtWdrw
CO-2	isiKAwrQI Awpxy ivcwr r`Kx kwrn Awpxw p`K spSt krn dy smr`Q ho jWdw hY[AsweInmYNt
CO-3	iksy vI BwSw dI DunI ivauNq nUM smJx dy smr`Q ho jWdw hY[jmwqI tYst,AwpsI ivcwr vtWdrw
CO-4	isiKAwrQI BwSw dy Sbd dI ivauNqbMdI is`Kx kwrn BwSw mwihR bxdw hY[qKqw tYst
CO-5	isiKAwrQI v`fI g`l nUM QoHVy SbdW iv`c kihx dy smr`Q ho jWdw hY[AwpsI ivcwr vtWdrw
CO-6	isiKAwrQI sihj rUp iv`c Biv`K leI iqAwR huMdw hY[AsweInmYNt

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DESCRIPTION OF COURSE OUTCOMES

NAME OF THE DEAPRTMENT: **Biotechnology and Food Processing**

NAME OF THE PROGRAMME: B.Voc Food Processing

NAME OF COURSE: Documentation in Food Processing

NAME OF FACULTY: A.P. Navreet

C.O. No.	Description of Course Outcome	Method/sof Assessment
CO-1	Define and describe major terminologies related to documentation in food industry.	University exams, MST, Class tests
CO-2	Write well-structured reports, proposals to facilitate the different industrial activities.	Viva, Class tests, assgnments

CO-3	Classify and explain programs needed to inspect raw materials in different food industries.	Practicals, Viva
CO-4	Explain various types of packaging materials used in food industry.	Practical, Viva, Class tests
CO-5	Analyze and evaluate the hazards in food industry to improve the efficiency of industry.	Viva, class tests
CO-6	Describe different requirements essential for the labelling of packaged food products.	Viva, University exams, MST, class tests, Projects

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DESCRIPTION OF COURSE OUTCOMES

NAME OF THE DEAPRTMENT: **Biotechnology and Food Processing**

NAME OF THE PROGRAMME: B.Voc Food Processing

NAME OF COURSE: Drug abuse: Problems, Management and Prevention

NAME OF FACULTY: A.P. Navreet

C.O. No.	Description of Course Outcome	Method/sof Assessment
CO-1	Define and discuss concept of drug abuse	University exams, MST, Class tests, assignments
CO-2	Classify the types of drugs often abused	University exams, MST, Class tests, assignments , Viva , presentation
CO-3	Identify the short term and long terms effects and symptom of drug abuse	University exams, MST, Class tests, assignments , Viva

CO-4	Describe the causes and consequences of drug abuse	University exams, MST, Class tests, assignments
CO-5	Explain and evaluate the management and prevention of drug abuse	University exams, MST, Class tests, assignments, presentations
CO-6	Identify and explain the role of family, schools, media, legislation and deaddiction centres in curbing drug abuse	Viva, University exams, MST, class tests, Projects

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DESCRIPTION OF COURSE OUTCOMES

NAME OF THE DEAPRTMENT: **Biotechnology and Food Processing**

NAME OF THE PROGRAMME: B.Voc Food Processing

NAME OF COURSE: Entrepreneurship development in processing

NAME OF FACULTY: A.P. Navreet

C.O. No.	Description of Course Outcome	Method/sof Assessment
CO-1	Assess entrepreneurial spirit through questionnaire	Assessment pro-forma, viva
CO-2	Demonstrate the core life skills	Lab work, viva
CO-3	Practise core life skills	Lab work, viva

CO-4	Analyse entrepreneurial opportunities in market	Field work, viva
CO-5	Identify and evaluate the strengths and weaknesses of entrepreneurs	Field work, viva
CO-6	Study different successful entrepreneurs	Projects, viva

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DESCRIPTION OF COURSE OUTCOMES

NAME OF THE DEAPRTMENT: **Biotechnology and Food Processing**

NAME OF THE PROGRAMME: B.Voc Food Processing

NAME OF COURSE: Entrepreneurship development in food processing

NAME OF FACULTY: A.P. Navreet

C.O. No.	Description of Course Outcome	Method/sof Assessment
CO-1	Define and explain entrepreneurship and the requirements to be an entrepreneur	University exams, MST, Class tests, presentation
CO-2	Identify and discuss the competencies of entrepreneurs.	Viva, Class tests, assgnments
CO-3	Describe the functions of different governmental and	University exams, MST, Class tests,

	private institutes promoting potential entrepreneurs.	presentation, Viva
CO-4	Evaluate about planning a small scale unit	Practical, Viva, Class tests
CO-5	Plan project identification	Viva, class tests, University exams, MST, Class tests
CO-6	Explain the requirements to start a business	Viva, University exams, MST, class tests, Projects

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DESCRIPTION OF COURSE OUTCOMES

NAME OF THE DEAPRTMENT: **Biotechnology and Food Processing**

NAME OF THE PROGRAMME: B.Voc Food Processing

NAME OF COURSE: Food Product packaging technician level 5

NAME OF FACULTY: A.P. Navreet

C.O. No.	Description of Course Outcome	Method/sof Assessment
CO-1	Plan, organize, prioritize, calculate and handle pressure	Lab work, viva, assignment, presentation, industrial visits
CO-2	Develop reading, writing and communication skills to communicate effectively with higher authorities and works	Lab work, viva, assignment, presentation
CO-3	Develop team worker and have good hand eye coordination	Lab work, viva, assignment, presentation, industrial visit

CO-4	Practise to handle all categories of packaging such as primary, secondary and tertiary packaging for food products.	Industrial visit, viva, assignment, presentation
CO-5	Explain GMP, HACCP, QMS etc.	Presentation, Industrial visit, viva, assignment,
CO-6	Describe food Safety Standards and Regulations	Projects, viva, Presentation, Industrial visit, assignment,

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DESCRIPTION OF COURSE OUTCOMES

NAME OF THE DEAPRTMENT: **Biotechnology and Food Processing**

NAME OF THE PROGRAMME: B.Voc Food Processing

NAME OF COURSE: Chief miller- level 6

NAME OF FACULTY: A.P. Navreet

C.O. No.	Description of Course Outcome	Method/sof Assessment
CO-1	Practise the milling process for all types of grains overseeing activities	Lab work, viva, assignment, presentation, industrial visits
CO-2	Handle various milling machineries	Lab work, viva, assignment, presentation, industrial visits
CO-3	Explain and evaluate inspection of raw material and	Lab work, viva, assignment,

	finished	presentation, industrial visits
CO-4	Develop reading, writing and communication skills to communicate effectively with higher authorities and works.	assignment, presentation, viva
CO-5	Develop ability to plan, organize, prioritize, calculate, concentrate and handle pressure.	industrial visits, lab work
CO-6	Develop mechanical aptitude and trouble shooting skills	industrial visits, lab work

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DESCRIPTION OF COURSE OUTCOMES

NAME OF THE DEAPRTMENT: **Biotechnology and Food Processing**

NAME OF THE PROGRAMME: B.Voc Food Processing

NAME OF COURSE: Production manager

NAME OF FACULTY: A.P. Navreet

C.O. No.	Description of Course Outcome	Method/sof Assessment
CO-1	Plan, coordinate and control various production processes	Lab work, viva, industrial visit
CO-2	Practise to obtain desired quantity and quality of products	Lab work, viva, industrial visit
CO-3	Develop mathematical, organizational and analytical	Lab work, viva, industrial visit

	skills	
CO-4	Develop team worker and have good hand eye coordination	Industrial visit, Lab work
CO-5	Develop reading, writing and communication skills to communicate effectively with higher authorities and works	Presentation, assignments
CO-6	Describe food Safety Standards and Regulations	Projects, viva, Lab work, viva, industrial visit

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DESCRIPTION OF COURSE OUTCOMES

NAME OF THE DEAPRTMENT: **Biotechnology and Food Processing**

NAME OF THE PROGRAMME: B.Voc Food Processing

NAME OF COURSE: Food Product Packaging Technology- practical

NAME OF FACULTY: A.P. Navreet

C.O. No.	Description of Course Outcome	Method/sof Assessment
CO-1	Identify different types of packaging materials	Lab work, viva, assignment
CO-2	Perform destructive and non- destructive tests for glass containers	Lab work, viva
CO-3	Determine tensile strength, tearing strength, water vapour transmission rate and drop test	Lab work, viva

CO-4	Demonstrate vacuum and shrink packaging and intelligent packaging	Industrial visit, viva, lab work
CO-5	Measure thickness of packaging material, wax weight, grease resistance, bursting strength, chemical resistance and can seaming.	Lab work, viva
CO-6	Study latest trends in packaging	Projects, viva, assignment

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DESCRIPTION OF COURSE OUTCOMES

NAME OF THE DEAPRTMENT: **Biotechnology and Food Processing**

NAME OF THE PROGRAMME: B.Voc Food Processing

NAME OF COURSE: Food Product Packaging Technology

NAME OF FACULTY: A.P. Navreet

C.O. No.	Description of Course Outcome	Method/sof Assessment
CO-1	Define and categorize different types of packaging materials	University exams, MST, Class tests
CO-2	Identify packaging requirements and their selection for	Viva, Class tests, assgnments

	raw and processed foods	
CO-3	Explain different forms of packaging.	Practicals, Viva
CO-4	Evaluation of quality and safety of packaging materials.	Practical, Viva, Class tests
CO-5	Describe various packaging machinery	Viva, class tests
CO-6	Explain Food Safety Standards and Regulations	Viva, University exams, MST, class tests, Projects

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DESCRIPTION OF COURSE OUTCOMES

NAME OF THE DEAPRTMENT: **Biotechnology and Food Processing**

NAME OF THE PROGRAMME: B.Voc Food Processing

NAME OF COURSE: Industrial training

NAME OF FACULTY: A.P. Navreet

C.O. No.	Description of Course Outcome	Method/sof Assessment
CO-1	Plan, coordinate and control various production processes	Industrial visit, viva, presentation, assignment, industrial training
CO-2	Practise skill set and industrial work ethics	Lab work, viva, industrial visits, industrial training
CO-3	Develop mathematical, organizational and analytical	Lab work, viva, industrial visit, industrial training

	skills	
CO-4	Develop team worker and have good hand eye coordination	Industrial visit, Lab work, industrial training
CO-5	Develop reading, writing and communication skills to communicate effectively with higher authorities and works	Presentation, assignments, industrial training
CO-6	Describe food Safety Standards and Regulations	Projects, viva, Lab work, viva, industrial visit, industrial training

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DESCRIPTION OF COURSE OUTCOMES

NAME OF THE DEAPRTMENT: **Biotechnology and Food Processing**

NAME OF THE PROGRAMME: B.Voc Food Processing

NAME OF COURSE: Industrial visit

NAME OF FACULTY: A.P. Navreet

C.O. No.	Description of Course Outcome	Method/sof Assessment
CO-1	Accumulate knowledge regarding internal working of industries	Industrial visit, viva, presentation, assignment
CO-2	Evaluate different industrial processes like GMP and HACCP	Industrial visit, viva, presentation, assignment, lab work

CO-3	Identify various production processes for different food products	Industrial visit, viva, presentation, assignment
CO-4	Generate ideas about how to start a business	Industrial visit, viva
CO-5	Recognise functional opportunities in different sectors to combine theoretical knowledge with industrial knowledge	Industrial visit, viva, presentation, assignment
CO-6	Evaluate the working environment of industries	Industrial visit, viva, presentation, assignment, Project

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DESCRIPTION OF COURSE OUTCOMES

NAME OF THE DEAPRTMENT: **Biotechnology and Food Processing**

NAME OF THE PROGRAMME: B.Voc Food Processing

NAME OF COURSE: Quality Control and regulations

NAME OF FACULTY: A.P. Navreet

C.O. No.	Description of Course Outcome	Method/sof Assessment
CO-1	Define and explain Good Laboratory practices and Good manufacturing Practices	University exams, MST, Class tests
CO-2	Describe role and importance of different food regulatory authority in India	Viva, Class tests, assignments

CO-3	Evaluate the need scope, limitations, legal issues and regulations of labelling	University exams, MST, Class tests, Viva
CO-4	Explain bio-safety guidelines for research	Practical, Viva, Class tests
CO-5	Identify and evaluate ISO 22000 certified Indian companies	University exams, MST, Class tests, Viva, class tests
CO-6	Explain the concept of HACCP, FSSAI 2006 and GMP	Viva, University exams, MST, class tests, Projects

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DESCRIPTION OF COURSE OUTCOMES

NAME OF THE DEAPRTMENT: **Biotechnology and Food Processing**

NAME OF THE PROGRAMME: B.Voc Food Processing

NAME OF COURSE: Quality control and regulations- practical

NAME OF FACULTY: A.P. Navreet

C.O. No.	Description of Course Outcome	Method/sof Assessment
CO-1	Identify and evaluate ISO 22000 certified Indian companies	assignment, viva
CO-2	Define and apply the concept of HACCP	Lab work, viva, assignment, presentation, Industrial visit
CO-3	Describe and evaluate the essentials of GMP	Lab work, viva, assignment, Industrial visit
CO-4	Define and explain bio-safety hazards	Industrial visit, viva, Lab work,

		assignment
CO-5	Explain and apply safety practices in production area	Presentation, Industrial visit, Lab work, viva, assignment
CO-6	Explain FSSAI 2006	Presentation, viva, assignment

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DESCRIPTION OF COURSE OUTCOMES

NAME OF THE DEAPRTMENT: **Biotechnology and Food Processing**

NAME OF THE PROGRAMME: B.Voc Food Processing

NAME OF COURSE: Sugar processing technology

NAME OF FACULTY: A.P. Navreet

C.O. No.	Description of Course Outcome	Method/s of Assessment
CO-1	Determine sugar content in fruit juice	Lab work, viva
CO-2	Identify reducing and non-reducing sugars in sugar products	Lab work, viva

CO-3	Prepare chocolate, candy and jelly.	Lab work, viva
CO-4	Calculate acidity and TSS of sugar products	Lab work, viva
CO-5	Study equipments related to sugar products	Presentation, industrial visits, viva, assignment
CO-6	Estimate moisture content of sugar product	Lab work, viva

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DESCRIPTION OF COURSE OUTCOMES

NAME OF THE DEAPRTMENT: **Biotechnology and Food Processing**

NAME OF THE PROGRAMME: B.Voc Food Processing

NAME OF COURSE: Documentation in Food Processing - Practical

NAME OF FACULTY: A.P. Navreet

C.O. No.	Description of Course Outcome	Method/sof Assessment
CO-1	Analyze and evaluate the problems in food industries using spreadsheets and word.	Lab work, viva
CO-2	Compare and contrast the data in food industry using statistical package.	Lab work, viva
CO-3	Explain and demonstrate the use of ERP to organize data	Lab work, viva

	from various departments of a food industry.	
CO-4	Accumulate the information about different production processes and machineries used in food industry by industrial visits.	Industrial visit, viva
CO-5	Develop skills to produce reports related to food industry.	Presentation
CO-6	Identify and practise the labelling requirements for packaged food materials.	Projects, viva

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DESCRIPTION OF COURSE OUTCOMES

NAME OF THE DEAPRTMENT: **Biotechnology and Food Processing**

NAME OF THE PROGRAMME: B.Voc Food Processing

NAME OF COURSE: Fundamentals of Foods and Nutrition- Practical

NAME OF FACULTY: A.P. Navreet

C.O. No.	Description of Course Outcome	Method/sof Assessment
CO-1	Develop the skills to identify the nutritional values of different food products.	Lab work, viva
CO-2	Estimate the iodine value of fats and oils.	Lab work, viva

CO-3	Determine the acid value of fats	Lab work, viva
CO-4	Calculate saponification value of fat.	Lab work, viva
CO-5	Analyze different nutrients by qualitative and quantitative methods.	Lab work, viva
CO-6	Plan and design a diet chart for normal physiological conditions.	Projects, viva

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DESCRIPTION OF COURSE OUTCOMES

NAME OF THE DEAPRTMENT: **Biotechnology and Food Processing**

NAME OF THE PROGRAMME: B.Voc Food Processing

NAME OF COURSE: Fundamentals of Foods and Nutrition

NAME OF FACULTY: A.P. Navreet

C.O. No.	Description of Course Outcome	Method/sof Assessment
CO-1	Define food and its components	University exam, MST, class tests, assignments
CO-2	Describe nutritive value of different food groups.	University exam, MST, class tests, assignments, presentation.
CO-3	Identify the causes and symptoms of deficiency and excess	University exam, MST, class tests,

	of different nutrients.	assignments, presentation, assignments.
CO-4	Define and design a balanced diet.	Lab work
CO-5	Explain the functions of different nutrients in body.	University exam, MST, class tests, assignments, presentation, assignments.
CO-6	Describe the dietary allowances and standards for different age group.	University exam, MST, class tests, assignments, presentation.

AMAR SHAHEED BABA AJIT SINGH JUHAR SINGH MEMORIAL COLLEGE, BELA RUPNAGAR, PUNJAB
MAPPING OF PROGRAM OUTCOME VERSUS COURSE OUTCOME
INTERNAL QUALITY ASSURANCE CELL



NAME OF DEPARTMENT: BIOTECHNOLOGY AND FOOD PROCESSING																			
NAME OF PROGRAMME: B.Sc.Hons.Biotechnology																			
NAME OF COURSES :Genetics																			
CORRELATION LEVEL:1,2, and 3;1-SLIGHT (LOW); 2-MODERATE (MEDIUM) 3- HIGH										MENTION GAP ANALYSIS AT THE END									
S.NO	Year	Semester	Name of Course/Code		PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1 2	PO1 3	PO1 4	PO1 5
1			Industrial Food Waste Managemenr	CO 1	2	1	1	2	3	3	3	1		1	2	2	2		
				CO 2	1			1	1	2	1	3					1	2	2
				C03	3			3		2		2	3				2	1	1
				CO 4	1	2	2	1	1		1			1				1	1
				CO 5		2	2	1	1		1			1				1	1
				CO 6	2	3	3		1		1			2	3	3	3	2	2
			practical IFWM	CO	3	1	1	1	2	2		3		2	1	1	3	3	

				1														
				CO 2	1				2	2		2		2	1	1		
				C03	1				1	1		1		2	3	3	2	2
				CO 4								2		2	1	1		
				CO 5	1	3	3	3	1	1	1	3	2	2	3	3	3	3
				CO 6	1	1	1	1	3	3	2	3	3	2	3	3	3	3
2			Food biochemistry	CO 1	3	3	3	1	1	1		3	3				1	1
				CO 2	2		3	3		2		3	1		2		1	2
				CO 3	3	3	2	2				3						
				CO 4	2			2			2	3					1	2
				CO 5	1		3		3			3	3					
				CO 6	1	3	3	2	3		2	3	3	3	2		1	2
			Pratical	CO 1	3	2		2				3	3	2	3		3	1
				CO 2	3	2		1				1		2	2			1
				CO 3	2	1		3				3		2	3	3	3	3
				CO 4	1	1	1					1		2	1			2
				CO 5		1		2			2	3	3	2	3		2	1

				CO 6	3		2	3	2	3	3	3	2	3	3	3	3		3
			Food Microbiology	CO 1	3	2	3	2		1	1	3	3	2	2	1	2		
				CO 2	2	1	2	2		1		2	2				3	2	
				CO 3	3	2		1		3	1	2		3	3				3
				CO 4	1	1	2	1		1	1		2			3			2
				CO 5		2	3	2		3	2		3	3	2	2		3	2
				CO 6	3		3	1		2		3	3			2	2	2	2
				CO 1	3	2	2			2	2	2		1			3		
			Pratical pertaining	CO 2	2	2								3	1`		1		
				CO 3	3	1	3	3		3		2		3	2		1		
				CO 4	2			2						3			2		1
				CO 5	1	2					3	2		3	1				
				CO 6	1			2			3	2		3					3

COURSE ATTAINMENT CALCULATION FOR ALL COURSES IN THE SEMESTER																
AMAR SHAHEED BABA AJIT SINGH JUJHAR SINGH MEMORIAL COLLEGE, ROPAR PUNJAB																
INTERNAL QUALITY ASSURANCE CELL																
PROGRAMME: B.VOC. FOOD PROCESSING																
S. NO.	NAME OF STUDENT	CLAS S R.NO. .	UNIVERSIT Y R. NO.	REGISTRATIO N NO.	PROJECT/ INDUSTRIA L REPORT									TOTAL OF ALL SUBJECTS/COURS ES	% age/CGP A	ATTAINMEN T LEVEL
					TOTAL (T+I+P)	TOTAL (T+I+P))	TOTAL (T+I+P))	TOTAL (T+I+P))	TOTAL (T+I+P))	TOTAL (T+I+P))	TOTAL (T+I+P))	TOTAL (T+I+P))	TOTAL (T+I+P))			
1	ANKITA SHARMA	2701			10									10	10 (100%)	3
2	MANPREET KAUR	2702			10									10	10 (100%)	3
3	DAMANPREET KAUR	2703			10									10	10 (100%)	3
4	HARJINDER KAUR	2704			10									10	10 (100%)	3
5	JOBANPREET KAUR	2705			10									10	10 (100%)	3
6	JASPREET KAUR	2706			10									10	10 (100%)	3
7	USHA RANI	2707			10									10	10 (100%)	3
8	SUNNY BHATTI	2751			10									10	10 (100%)	3
9	HARWINDER SINGH	2752			10									10	10 (100%)	3
10	IQBAL	2752			10									10	10	3

															(100%)	
11	HARJINDER SINGH	2754			10									10	10 (100%)	3
12	KIRANPREET SINGH	2755			10									10	10 (100%)	3
13	MANPREET SINGH	2756			10									10	10 (100%)	3
14	JASPREET SINGH	2757			10									10	10 (100%)	3
15	SATVIR SINGH	2758			10									10	10 (100%)	3
16	NAVJOT SINGH	2759			10									10	10 (100%)	3
17	DAMANJOT SAINI	2760			10									10	10 (100%)	3
18	ARSHDEEP SAINI	2761			10									10	10 (100%)	3
19	BIKRAMJEET SINGH	2768			10									10	10 (100%)	3
					AVERAGE									100		

Average Attainment of PO by direct method is **100 %**

Attainment of PO by Indirect Method (Exit Survey)

POs	DEGREE OF RELEVANCE					*% of PO	Level of attainment
	No. of 1	No. of 2	No. of 3	No. of 4	No. of 5		
1			3	14	2	78.95	level 3
2				14	5	85.26	level 3
3			1	15	3	82.1	level 3
4				13	6	86.32	level 3
5			4	12	3	78.95	level 3
6			1	13	5	84.21	level 3
7			2	14	3	81.1	level 3
8			5	9	5	80	level 3
9				10	9	89.47	level 3
10			1	10	8	87.36	level 3

Total PO attainment (%) = (weightage: 80 %) X (Average attainment in direct method) + (weightage: 20 %) X (Average attainment in indirect method)

$$= (80\%) \times 100\% + (20\%) \times 83.372.$$

$$= \quad \mathbf{96.67\%}$$

Level of Attainment = Level

