

 Estd. 1962 "A++" Accredited by NAAC (2021) With CGPA 3.52	SHIVAJI UNIVERSITY, KOLHAPUR 416 004, MAHARASHTRA PHONE : EPABX - 2609000, BOS Section - 0231-2609094, 2609487 Web : www.unishivaji.ac.in Email: bos@unishivaji.ac.in शिवाजी विद्यापीठ, कोल्हापूर, ४१६ ००४, महाराष्ट्र दूरध्वनी - इपीबीएक्स - २०६०९०००, अभ्यासमंडळे विभाग : ०२३१- २६०९०९४, २६०९४८७ वेबसाईट : www.unishivaji.ac.in ईमेल : bos@unishivaji.ac.in		
--	--	---	---

Ref.: SU/BOS/ IDS / 638

Date: 17 - 11- 2025

To,

The Principal,
All Concerned Affiliated Colleges/Institutions
Shivaji University, Kolhapur

Subject : Regarding revised syllabi of B. Voc. Catering and Hospitality Management Part I
degree programme under the Faculty of Inter- Disciplinary Studies as per NEP-2020 (2.0).

Sir/Madam,

With reference to the subject mentioned above, I am directed to inform you that the university authorities have accepted and granted approval to the revised syllabi, nature of question paper and equivalence of **B. Voc. Catering and Hospitality Management Part I** for follower's degree programme under the Faculty of Inter- Disciplinary Studies as per National Education Policy, 2020 (NEP 2.0).

This syllabus, nature of question and equivalence shall be implemented from the academic year **2025-2026** onwards. A soft copy containing the syllabus is attached herewith and it is also available on university website www.unishivaji.ac.in NEP-2020 (Online Syllabus)

The question papers on the pre-revised syllabi of above-mentioned course will be set for the examinations to be held in October /November 2025 & March/April 2026. These chances are available for repeater students, if any.

You are, therefore, requested to bring this to the notice of all students and teachers concerned.

Thanking you,

Yours Faithfully

(Dr. S. M. Kubal)

Dy Registrar

Encl. : As above.

Copy to: For Information and necessary action.

1	The Dean, Faculty of IDS	7	Affiliation T. 1 & T. 2 Section
2	Director, Board of Examination and Evaluation	8	Appointment A & B Section
3	The Chairman, Respective Board of Studies	9	P.G.Seminar Section
4	All On Exam Section	10	I.T. Cell
5	Eligibility Section	11	Internal Quality Assurance Cell (IQAC)
6	P. G. Admission Section		

Shivaji University Kolhapur



Established: 1962

Accredited By NAAC with 'A++' Grade with

CGPA 3.52

Revised Syllabus For

Bachelor of Vocation [B. Voc.] (NEP-2.0)

Part-I

Advanced Diploma In Catering and Hospitality Management

UNDER

Faculty of Interdisciplinary Studies Structure, Scheme and
Revised Syllabus

(To be implemented from academic year 2025-26 onwards)

Shivaji University, Kolhapur

NEP-2020 (2.0): Credit Frame work for UG B. Voc. I Program Under Faculty of Interdisciplinary Studies

B. Voc. Part I Advanced Diploma in Catering and Hospitality Management

Level	Semester	COURSES			OE	VSC/ SEC	AEC/VEC/IKS	OJT/FP/ CEP/ CC/ RP	Total Credit
		Course –I	Course -II	Course -III			IKS		
4.5	I	DSC-I (2) DSC-II (2) DSC Pract. I (2)	DSC-I (2) DSC-II (2) DSC Pract. I (2)	DSC-I (2) DSC-II (2) DSC Pract.I (2)	OE -I (T) (2)		IKS-I (2) Introduction to IKS		
	Credits	4+2=6	4+2=6	4+2=6	2		2		22
	II	DSC-III (2) DSC-IV (2) DSC Pract. II (2)	DSC – III (2) DSC-IV (2) DSC Pract.II(2)	DSC-III (2) DSC-IV (2) DSC Pract.I(2)	OE-II (T) (2)		VEC-I (2) (Democracy, Election and constitution)		
	Credits	4+2=6	4+2=6	4+2=6	2		2		22
	1 st Year Cum. Credits	8(T)+4(P)= 12	8(T)+4(P)= 12	8(T)+4(P)= 12	2+2 =4		2 + 2= 4		44
Exit Option: Award of FY Diploma Certificate with 44 Credits									

Semester I B. Voc. Advanced Diploma in Catering and Hospitality Management

Sem.	Course	Code	Paper No.	Title of Paper
I	I	DSC- I	B. Voc. Paper- I	Fundamental of food Science-I
		DSC- II	B. Voc. Paper- II	Food Production-I
		DSC- P- I	B. Voc. Practical –I	Based upon DSC-I and DSC- II
	II	DSC- I	B. Voc. Paper- I	Food and Beverage Service-I
		DSC- II	B. Voc. Paper- II	Front office Operation-I
		DSC- P- I	B. Voc. Practical –II	Based upon DSC-I and DSC -II
	III	DSC- I	B. Voc. Paper- I	Principles of Hospitality Management
		DSC- II	B. Voc. Paper- II	Nutrition & Food Science
		DSC- P- I	B. Voc. Practical –III	Based upon DSC – I and DSC - II
	OE -I	Open Elective	Theory (2)	Bakery & Confectionery
	IKS	Indian Knowledge System	Theory (2)	IKS (Generic)

Semester II B. Voc. Advanced Diploma in Catering and Hospitality Management

Sem.	Course	Code	Paper No.	Title of Paper
II	I	DSC- I	B. Voc. Paper- I	Fundamentals of Food Science - II
		DSC- II	B. Voc. Paper- II	Food Production- II
		DSC- P- I	B. Voc. Practical – I	Based upon DSC -I and DSC-II
	II	DSC- I	B. Voc. Paper- I	Food and Beverage Service-II
		DSC- II	B. Voc. Paper- II	Housekeeping Operation-I
		DSC- P- I	B. Voc. Practical – II	Based upon DSC – I and DSC - II
	III	DSC- I	B. Voc. Paper- I	Hospitality Marketing & Customer Relations
		DSC- II	B. Voc. Paper-II	Event Management & Banquet Operations
		DSC- P- I	B. Voc. Practical- III	Based upon DSC – I and DSC - II
	OE -II	Open Elective - II	Theory (2)	Computer Applications in Hospitality
	VEC	Value Education Course	Theory (2)	Democracy, Election and Good Governance

SHIVAJI UNIVERSITY, KOLHAPUR
B. Voc. Part I Sem. I: Advanced Diploma in Catering and Hospitality Management
NEP 2020 (2.0)
(Course - I) DSC– I B. Voc. Paper I
Fundamental of Food Science I

Theory: 30 Hours

(Credits: 02)

Unit – I: Introduction to Food Science

8 Hours

1. Concept of food, food science
2. Objectives of food science
3. Functions of food

Unit – II: Classification of Food

7 Hours

1. According to food science
2. Basic five food groups
3. Selection of food

Unit – III: Methods of Cooking

8 Hours

1. Traditional cooking methods
2. Modern cooking methods
3. Objectives and importance of cooking

Unit – IV: Food Preparation and Storage

7 Hours

1. Basic terms used in food preparation
2. Pre-preparation for cooking
3. Storage of raw and cooked food

Reference Books:

- B. Shreelakshmi : ``Food Science`` (second edition), New Age International, New Delhi.
- Swaminathan : ``Text book of Food Science``, Vol-1, BAPPCO, Bangalore
- Devendrakumar Bhatt & Priyanka Tomar : An Introduction to Food Science, Technology & Quality Management, Kalyani Publishers.
- Sumati R. Mudambi : Fundamentals of Food & Nutrition wiley Eastern Ltd., New Delhi.

SHIVAJI UNIVERSITY, KOLHAPUR
B. Voc. Part I Sem. I: Advanced Diploma in Catering and Hospitality Management
NEP 2020 (2.0)
(Course - I) DSC– II B. Voc. Paper II
Food Production I

Theory: 30 Hours

(Credits: 02)

Unit I : Introduction To Professional Cookery **8 Hours**

1. History of Cookery
2. Origins of Modern Cookery
3. Hygiene and safe practices in handling food
4. Attitude & Behavior in the Kitchen
5. Kitchen uniforms
6. Safety Procedure for Handling Equipments

Unit II: Kitchen Staffing **7 Hours**

1. Classical kitchen Brigade for a 5 stars and 3 stars hotels
2. Kitchen Staffing in Various Category Hotels
3. Duties & Responsibilities of Executive Chef and Various Chefs
4. Inter-departmental Co-ordination.

Unit III: Kitchen Hand Tools **8 Hours**

1. Tools & utensils used in the Kitchen.
2. Different Types of Fuel used in Kitchen
3. Precaution and care in handling and maintenance of equipments

Unit IV; Aims & Objectives of Cooking Food **7 Hours**

1. Aims and objective of Cooking Food.
2. Classification of Raw Materials according to their Functions.
3. Various Textures.
4. Role of Spices / Herbs in India.
5. Local names of spices.

Reference Books:

- Practical Cookery- Victor Ceserani & Ronald Kinton, ELBS
- Theory of Catering- Victor Ceserani & Ronald Kinton, ELBS
- Theory of Catering- Mrs. K. Arora, Franck Brothers
- Modern Cookery for Teaching & Trade Vol I -Ms. Thangam Philip, Orient Longman.
- The Professional Chef (4th Edition)-Le R01 A. Polsom
- The book of Ingredients- Jane Grigson
- Food Commodities-Bernard Davis.

SHIVAJI UNIVERSITY, KOLHAPUR

B. Voc. Part I Sem. I: Advanced Diploma in Catering and Hospitality Management

NEP 2020 (2.0)

(Course - I) DSC– Practical B. Voc. Paper III

Fundamental of Food Science I and Food Science I

Theory: 30 Hours

(Credits: 02)

List of Practical's:

Group – I

Practical's Based Basics of Fundamental of Food Science I

1. Introduction to laboratory rules.
2. Equipments used in cooking
3. Terms used in cooking.
4. Weights and Measures of raw and cooked food.
5. Methods of cooking –Traditional methods – Preparation of any two recipes from the following:
a) Boiling b) Roasting c) Frying d) Steaming
6. Modern methods - Preparation of any two recipes from the following: a) Baking b) Solar c) Microwave d) Combination

Group – II

Practical's Based Basics of Food Science I

1. **Demonstration of Kitchen Hygiene & Sanitation Practices-** Washing, cutting, storing food; personal hygiene checklist
2. **Safe Handling of Kitchen Equipment-** Practical demo on using knives, mixers, ovens, gas stoves, induction, etc.
3. **Demonstration of Kitchen Uniform & Grooming Standards-** Wearing complete uniform (chef coat, apron, cap, shoes), explaining significance.
4. **Simulation of Interdepartmental Coordination -** Mock activity showing coordination between kitchen, service, housekeeping, and stores
5. **Identification & Handling of Kitchen Tools and Utensils-** Practical identification, correct usage, and cleaning methods.
6. **Demonstration of Fuels Used in Kitchen-** Practical comparison of LPG, induction, charcoal, etc., with safety measures
7. **Equipment Care & Maintenance-** clean and maintain knives, cutting boards, refrigerators, and ovens

8. **Cooking Methods Demonstration-** Boiling, steaming, frying, roasting, grilling – with aim & objective explained.

Reference Books:

- Theory of Cookery” – Krishna Arora
- “Practical Cookery” – Kinton & Ceserani
- Culinary Arts Principles and Applications” – Noble Masi
- “Textbook of Food & Beverage Management” – Sudhir Andrews

SHIVAJI UNIVERSITY, KOLHAPUR

B. Voc. Part I Sem. I: Advanced Diploma in Catering and Hospitality Management

NEP 2020 (2.0)

(Course - II) DSC–DSC-I B. Voc. Paper I

Food and Beverage Service-I

Theory: 30 Hours

(Credits: 02)

Unit I: The Food & Beverage Service Industry 8 Hours

1. Introduction to the Food & Beverage Industry
2. Classification of Catering Establishments (Commercial & Non-Commercial)
3. Introduction to Food & Beverage Operations (Types of F&B Outlets)

Unit II: Food & Beverage Service areas in a Hotel 7 Hours

1. Restaurant, Coffee Shop, Room Service, Bars, Banquets, Snack Bar, Executive Lounges, Business Centers, Discotheques & Night Clubs.
2. Auxiliary areas

Unit III: Food & Beverage Service Equipment 8 Hours

1. Types & Usage of Equipments Furniture, Chinaware, Silverware & Glassware, Linen, Disposables,
2. Special Equipment
3. Care & maintenance

Unit IV: Food & Beverage Service Personnel 7 Hours

1. Food & Beverage Service Organization St Job Descriptions & Job specifications & Beverage
2. Attitudes & Attributes of Food personnel, competencies.
3. Basic Etiquettes .
4. Interdepartmental relationship

Reference Books:

- Food & Beverage Service - Lillicrap & Cousins, ELBSModern
- Restaurant Service -John Fuller, HutchinsonFood & Beverage Service
- Training Manual - Sudhir Andrews, Tata McGraw Hill.

SHIVAJI UNIVERSITY, KOLHAPUR

B. Voc. Part I Sem. I: Advanced Diploma in Catering and Hospitality Management

NEP 2020 (2.0)

(Course - II) DSC–DSC-II B. Voc. Paper II

Front office Operation-I

Theory: 30 Hours

(Credits: 02)

Unit I: Introduction to Front Office Department

7 Hours

1. The term 'Hotel', Introduction To Hospitality Industry evolution & development of hospitality industry and tourism, famous hotels worldwide
2. Classification of hotels. (based On various categories like size) location, clientele, length of stay, facilities, .
3. Organizational chart of hotels (Large, Medium, Small)

Unit II: Front Office Department

8 Hours

1. Sections and layout of Front Office
2. Organizational chart of front office department (small, medium and large hotels)
3. Duties and responsibilities of various staff
4. Attributes of front office personnel
5. Co-ordination of front office With other departments of the hotel
6. Equipments used (Manual and Automated)

Unit III: Room Types & Tariffs

7 Hours

1. Types of rooms.
2. Food / Meal plans.
3. Types of room rates . (Rack, FIT, crew, group, corporate, weekend etc.)

Unit IV: Role of Front Office

8 Hours

1. Key control and key handling procedures Mail and message handling
2. Mail and message handling
3. Paging and luggage handling
4. Rules of the house [for guest and staff]
5. Black list Bell Desk and Concierge
6. Bell Desk and Concierge

Reference Books:

- Check in Checkout by Jerome Vallen.
- Hotel front Office Training Manual by Sudhir Andrews
- Principles of Hotel Front Office Operations by Sue Baker, P. Bradley, J. Huyton
- Hotel Front Office by Bruce Braham
- Managing Front Office Operations by Michael Kasavana, Charles Steadmon
- Front Office Procedures and Management by Peter Abbott
- Front Office operations/Accommodations Operations by Colin Dix
- Front Office operation and Administration by Dennis Foster

SHIVAJI UNIVERSITY, KOLHAPUR

B. Voc. Part I Sem. I: Advanced Diploma in Catering and Hospitality Management

NEP 2020 (2.0)

(Course - II) DSC– Practical B. Voc. Paper III

Food and Beverage Service-I and Front office Operation-I

Theory: 30 Hours

(Credits: 02)

List of Practical's:

Group – I

Practicals based on Food and Beverage Service-I

1. Visit a commercial (hotel/restaurant) and a non-commercial (canteen/industrial catering) outlet and prepare a comparison report.
2. Presentation/role-play of different outlets (fine dining, quick service, coffee shop, room service) with mock setups.
3. Practice on laying out a restaurant, coffee shop, and room service trolley
4. Hands-on session with crockery, cutlery, glassware, and silverware, explaining usage.
5. Cleaning, polishing of silverware, handling of chinaware, linen folding, and care of disposables.
6. Role play of different job roles (captain, steward, busboy, sommelier, etc.) to understand hierarchy & job responsibilities.
7. Practical exercises on greeting guests, posture, grooming standards, and basic conversational etiquette.
8. Self-Service & Specialized Service Practice of Buffet layout, tray service, room service tray/trolley setup, and vending kiosk simulation

Group – II

Practicals based on Front office Operation-I

1. prepare a chart showing classification of hotels (size, location, clientele, facilities) with examples of famous hotels worldwide.
2. Preparation of organizational charts for small, medium, and large hotels; group presentation/discussion.
3. Drawing or model presentation of front office layout (reception, lobby, bell desk, cash

counter, etc.).

4. Grooming standards, body language, greeting guests, telephone etiquette, and attributes of front office staff.
5. Mock exercise showing coordination between front office, housekeeping, F&B, and maintenance for smooth guest handling
6. Identification of Room Types & Meal Plans- Use of pictures, mock-ups, or site visit to identify different room types (single, double, suite, deluxe) and meal plans (EP, CP, MAP, AP).
7. Demonstration of key control, handling guest mail/messages, paging system, and record-keeping.
8. Practical exercise in luggage handling, guest escorting, concierge services (travel desk, sightseeing, ticketing assistance).

Reference Books:

- “Food & Beverage Service” – Dennis R. Lillicrap, John A. Cousins & Robert Smith
- “Textbook of Food & Beverage Service” – S.N. Bagchi
- “Food & Beverage Service: A Training Manual” – R. Singaravelavan
- “Introduction to Hospitality” – John R. Walker
- “Hotel Front Office Training Manual” – Sudhir Andrews
- “Front Office Operations & Management” – Ahmed Ismail
- “Managing Front Office Operations” – Michael L. Kasavana & Richard M. Brooks
- “Hotel Front Office Management” – James A. Bardi

SHIVAJI UNIVERSITY, KOLHAPUR

B. Voc. Part I Sem. I: Advanced Diploma in Catering and Hospitality Management

NEP 2020 (2.0)

(Course - III) DSC– I B. Voc. Paper I

Principles of Hospitality Management

Theory: 30 Hours

(Credits: 02)

Unit I: Introduction to Hospitality Industry

7 Hours

1. Definition, scope and nature of hospitality industry
2. Evolution & growth of hospitality and tourism industry (global & Indian context)
3. Characteristics of hospitality services
4. Role of hospitality in economic & social development
5. Types of hospitality establishments (Hotels, Restaurants, Resorts, Cruise, etc.)

Unit II: Principles of Hospitality Management

8 Hours

1. Basic principles of management and their application in hospitality
2. Functions of management: Planning, Organizing, Staffing, Directing, Controlling
3. Importance of leadership, motivation & communication in hospitality sector
4. Ethics, values & professionalism in hospitality
5. Guest relations and quality service concepts

Unit III: Hospitality Operations

7 Hours

1. Overview of key hotel departments: Front Office, Housekeeping, Food & Beverage, Kitchen, Sales & Marketing
2. Interdepartmental coordination and teamwork
3. Standard operating procedures (SOPs) in hospitality
4. Role of technology in hospitality operations (PMS, automation, online bookings)
5. Safety, security, hygiene, and legal aspects in hospitality

Unit IV: Contemporary Trends & Career Development

8 Hours

1. Emerging trends in hospitality and tourism (eco-tourism, sustainable practices, digital marketing, AI in hotels, etc.)
2. Career opportunities in hospitality and catering industry
3. Skills and attributes required for hospitality professionals
4. Challenges and future of the hospitality industry
5. Case studies of successful hospitality organizations

Reference Books

- “Hospitality Management” – Tim Knowles

- “Hospitality Management and Organisational Behaviour” – Laurie J. Mullins
- “Introduction to Hospitality” – John R. Walker
- “Fundamentals of Management in Hospitality Industry” – Robert Woods, Michael Reynolds & Richard Schmidgall
- “Hotel Management & Operations” – Michael J. O’Fallon & Denney G. Rutherford
- “Managing Front Office Operations” – Michael L. Kasavana & Richard M. Brooks (for operational insights)
- “Hospitality Today: An Introduction” – Rocco Angelo & Andrew Vladimir

SHIVAJI UNIVERSITY, KOLHAPUR

B. Voc. Part I Sem. I: Advanced Diploma in Catering and Hospitality Management

NEP 2020 (2.0)

(Course - III) DSC– II B. Voc. Paper II

Nutrition and Food Science

Theory: 30 Hours

(Credits: 02)

Unit I: Introduction to Nutrition

7 Hours

1. Definition and scope of nutrition
2. Basic nutrients: carbohydrates, proteins, fats, vitamins, minerals, water
3. Functions of nutrients in the body
4. Balanced diet and dietary guidelines
5. Factors affecting nutritional requirements (age, gender, activity, health status)

Unit II: Food Science Fundamentals

8 Hours

1. Introduction to food science and its importance in hospitality
2. Food composition and properties (carbohydrates, proteins, fats, water content)
3. Food spoilage, preservation, and shelf life
4. Methods of food processing (thermal, non-thermal, chemical, and biological)
5. Food additives: types, uses, and safety considerations

Unit III: Food Groups and Meal Planning

7 Hours

1. Classification of foods (cereals, pulses, vegetables, fruits, dairy, meat, fish, eggs)
2. Nutritional value and culinary applications of different food groups
3. Principles of meal planning for different age groups, lifestyles, and health conditions
4. Diet modifications for special conditions: diabetes, hypertension, obesity, malnutrition
5. Food labeling and nutritional information

Unit IV: Food Hygiene, Safety, and Contemporary Issues

8 Hours

1. Importance of food hygiene and safety in hospitality

2. Microbial contamination and prevention (bacteria, fungi, viruses, parasites)
3. Foodborne illnesses and outbreaks
4. Modern trends in nutrition: functional foods, organic foods, nutraceuticals, diet fads
5. Sustainability in food service: reducing food waste, eco-friendly practice

Reference Books

- “Nutrition and Dietetics” – M. Swaminathan
- “Food Science” – B. Srilakshmi
- “Nutrition for Food Service and Hospitality” – Marie A. Boyle & Carol Byrd-Bredbenner
- “Understanding Nutrition” – Whitney & Rolfes
- “Modern Nutrition in Health and Disease” – Maurice Shils et al
- “Food Science and Nutrition” – Anita Tull
- “Food Hygiene and Sanitation” – S.R. Mudambi

SHIVAJI UNIVERSITY, KOLHAPUR

B. Voc. Part I Sem. I: Advanced Diploma in Catering and Hospitality Management

NEP 2020 (2.0)

Course - III) DSC– Practical B. Voc. Paper III

Principles of Hospitality Management and Nutrition and Food Science

Theory: 30 Hours

(Credits: 02)

List of Practical's:

Group - I

Practicals based on Principles of Hospitality Management

1. Create a visual timeline showing the evolution of global and Indian hospitality industries with major milestones and famous hotels
2. Identify characteristics of hospitality services in different establishments and present a comparative chart.
3. Management function role play of enact planning, organizing, staffing, directing, and controlling activities in a mock hotel scenario.
4. Analyze real-life hospitality scenarios to identify ethical issues, decision-making, and professional behavior
5. Mock exercise showing coordination between Front Office, Housekeeping, F&B, and Kitchen during guest check-in/check-out and banquet service.
6. Prepare draft Standard Operating Procedures for a selected hotel department (Front Office, F&B, or Housekeeping).
7. Hands-on practice with Property Management Systems (PMS), online booking platforms, and automated check-in systems.
8. Visit a hotel, resort, or restaurant and prepare a report on its type, size, services offered, and role in tourism.

Group – II

Practical's based on Nutrition and Food Science

1. Identify and classify nutrients in common foods (carbohydrates, proteins, fats, vitamins, minerals, water).

2. Prepare sample balanced diets for different age groups (children, adults, elderly) following dietary guidelines.
3. Determine approximate composition of a food item (e.g., protein content in pulses, fat in dairy products).
4. Hands-on practice with preservation methods: refrigeration, canning, drying, pickling, pasteurization.
5. Identify common food additives in packaged foods and discuss their types, uses, and safety considerations.
6. Categorize different foods into cereals, pulses, vegetables, fruits, dairy, meat, fish, eggs, and present nutritional values.
7. Design meal plans for special health conditions such as diabetes, hypertension, obesity, or malnutrition.
8. Analyze packaged food labels to interpret calories, macronutrients, vitamins, minerals, and health claims.

Reference Books:

“Nutrition and Dietetics” – M. Swaminathan

“Food Science” – B. Srilakshmi

“Understanding Nutrition” – Whitney & Rolfes

“Nutrition for Food Service and Hospitality” – Marie A. Boyle & Carol Byrd-Bredbenner

SHIVAJI UNIVERSITY, KOLHAPUR

B. Voc. Part I Sem. I: Advanced /5

NEP 2020 (2.0)

OPEN ELECTIVE – I (Theory)

Bakery and Confectionary

Theory: 30 Hours

(Credits: 02)

Unit:1 Introduction, Ingredients & Equipment

(08 Hours)

1. History and development of bakery & confectionery
2. Classification: breads, cakes, pastries, cookies, chocolates, sugar confections, regional vs international
3. Bakery & confectionery equipment, tools, ovens, mixers
4. Raw materials: flour (wheat, non-wheat), sugar, fats & oils, eggs, milk & milk solids, yeasts & leavening agents, emulsifiers, stabilizers, flavorings, colors, fillings, creams, chocolates, nuts, dried fruits
5. Functional properties of ingredients

Unit:2 Bread, Doughs, and Yeast Products

(07 Hours)

1. Breadmaking – classification, methods (straight dough, sponge & dough, sourdough)
2. Fermentation, proofing, and baking
3. Enriched doughs, rolls, buns
4. Laminated doughs (croissants, Danish)
5. Flat breads, focaccia, pizza doughs
6. Troubleshooting dough problems
7. Shelf life, staling, and retardation techniques.

Unit 3 Cakes, Pastries, and Cookies

(08 Hours)

1. Cake types: sponge, butter, chiffon, foam, layer cakes
2. Cake mixing methods (creaming, all-in-one, reverse, etc.)
3. Icings, frostings, ganache, fillings, glaze
4. Cookies, biscuits, crackers
5. Tarts, pies, quiches
6. Puff pastry, shortcrust, choux pastry
7. Dough handling, shaping, baking, finishing

8. Decoration techniques: piping, moulding, fondant, sugar craft

Unit: 4 Chocolates, Sugar Work, Packaging, Quality Control & Safety

(07Hours)

1. Types of chocolate, tempering, molding, enrobing
2. Sugar cookery: syrups, caramel, fondant, toffee, praline, spun sugar, sugar sculptures
3. Confectionery: soft candies, fudges, nougat, truffles
4. Packaging, labeling, shelf life, storage conditions
5. Quality standards, defects, sensory evaluation
6. Costing, portion control, yield calculations
7. Hygiene, safety, HACCP in bakery/confectionery
8. Waste management, energy conservation

Reference Books:

1. “A Textbook of Baking and Pastry Fundamentals” — (Pearson)
2. “Modern Cookery for Teaching & the Trade” by Philip E. Thangam (Vol I
3. “Theory of Catering” by Kinton & Cessarani (or Cessarani & Kinton)
4. “Bakery & Confectionery” by Society of Indian Bakers
5. “Professional Baking” by Wayne Gisslen (John Wiley)

SHIVAJI UNIVERSITY, KOLHAPUR
B. Voc. Part I Sem. I: Advanced Diploma in Catering and Hospitality management
NEP 2020 (2.0)
IKS – I (Theory)

Theory: 30 Hours

(Credits: 02)

SYLLABUS IS SAME FOR ALL B VOC COURSES

SHIVAJI UNIVERSITY, KOLHAPUR
B. Voc. Part I Sem. II: Advanced Diploma in Catering and Hospitality Management
NEP 2020 (2.0)
(Course - I) DSC– I B. Voc. Paper I
Fundamental of food Science- II

Theory: 30 Hours

(Credits: 02)

Unit: 1 Cereal cookery

7 Hours

1. Structure, composition and importance of cereal grains
2. Types of cereals used in cooking
3. Cereal cookery Gelatinization. Dextrinization and identity of grain
4. Processed cereals, millets and Ready-To Eat cereals used in cooking

Unit: 2 Pulse and Legume Cookery

(8hours)

1. Definition. composition and structure of pulses
2. Cooking of Legumes
3. Factors Affecting cooking time of pulses and legumes
4. Uses of legumes in cookery

Unit: 3 Nuts and Oil seeds Cookery

(8 hours)

1. Types and composition of Nuts and Oil seeds
2. Toxic substances in Nuts and Oil seeds
3. Changes during cooking and storage
4. Function of Nuts and Oil seeds in cookery.

Unit: 4 Fruits and Vegetables Cookery

(7 hours)

1. Classification of Fruits and vegetables
2. Color pigments in Fruits and vegetables
3. Effect of heat, acid and alkali on fruits and vegetable
4. Changes during cooking and storag

Reference Books:

- B. Shreelakshmi : “Food Science” (second edition). New Age international, New Delhi.
- Swaminathan : “Text book of Food Science”, Vol-1, BAPPCO, Bangalore
- Devendrakumar Bhatt & Priyanka Tomar : An introduction to Food Science. Technology & Quality Management, Kalyani Publishers.
- Sumati R. Mudambi : Fundamentals of Food & Nutrition wiley Eastern Ltd., New Delhi.
- Philips T E. Modern Cooking for teaching and trade, Volit orient longma.

SHIVAJI UNIVERSITY, KOLHAPUR
B. Voc. Part I Sem. II: Advanced Diploma in Catering And Hospitality Management
NEP 2020 (2.0)
(Course - I) DSC– II B. Voc. Paper II
Food Production II

Theory: 30 Hours

(Credits: 02)

Unite I: Stocks

(7 hours)

1. Definition & uses of stocks
2. Classification
3. Rules of stock making table
4. Recipes of 1 liter of various stocks (White, brown. fish and vegetable)
5. Glazes & Aspic
6. Storage Care

Unite II: Sauces

(8 hours)

1. Classification & uses of sauces
2. Composition
3. Thickening agents
4. Recipes of mother sauces .
5. Finishing of sauces (reducing, straining, de glazing, enriching and seasoning)
6. Precautions & rectification, handling & storage
7. Derivatives (five each)
8. Pan gravies
9. Flavored butters

Unite III: Soups

(7 hours)

1. Aim of soup making
2. Classification of soups Cream, Puree, Veloute, Chowder , Consommé, National soups

Unit IV: Basic Masalas & Gravies used in Indian Cooking

(8 hours)

1. Blending of spices and concept of masala
2. Composition of different masala used in Indian Cooking (wet & dry)
3. Proprietary masala blends
4. Preparation of different masalas- Basic Garam Masala, Madras Curry Powder, Sambar Masala, Chat Masala, Goda Masala, Kolhapuri Masala, Vindaloo Masala
5. Popular Gravies used in Indian Cooking -White, Brown, Tomato, Green, Moghlai

Reference Books:

- Practical Cookery -Victor Ceserani & Ronald Kinton, ELBS
- Theory of Catering- Victor Ceserani& Ronald Kinton, ELBS
- Theory of Catering-Mrs. K. Arora, Franck Brothers
- Modern Cookery for Teaching & Trade Vol I - MsThangam Philip, Onent Longman.
- The Professional Chef (4th Edition)-Le Rol A. Polsom
- The book of Ingredients- Jane Grigson
- Success in Principles of catering Michael Colleer & Colin Saussarns

SHIVAJI UNIVERSITY, KOLHAPUR

B. Voc. Part I Sem. II: Advanced Diploma in Catering and Hospitality Management

NEP 2020 (2.0)

(Course - I) DSC– Practical B. Voc. Paper III

Fundamental of Food Science-II and Food Production-II

Theory: 30 Hours

(Credits: 02)

List of Practical's:

Group – I

Practical's Based on Fundamental of Food Science-II:

1. Study of Structure & Composition of Cereal Grains (rice, wheat, maize, barley, oats)
2. Cooking Rice by Different Methods (Boiling, steaming, absorption, pressure cooking)
3. Preparation of custard/pudding with corn starch
4. Cooking Whole vs. Split Legumes Prepare dal (e.g., moong dal vs. whole green gram) and Record differences in cooking time, texture, and taste
5. Effect of Factors on Cooking Time of Pulses- Cook dal with variations (With/without soaking, With acid (tomato/lemon), With alkali (baking soda))
6. Preparation of Nut-based Dish E.g., almond halwa, cashew curry.
7. Effect of Roasting on Oil- Seeds oast vs. unroasted sesame/groundnut.
8. Effect of Acid, Alkali & Heat on Vegetable Pigments-Cook green vegetables (spinach) in acid, alkali, plain water.

Group – II

Practical's based on Food Production-II

1. . Preparation of Basic White Stock
2. Preparation & Comparison of Brown, Fish & Vegetable Stock
3. Preparation of Mother Sauces (Béchamel, Velouté, Espagnole, Hollandaise, Tomato)
4. Derivatives of Mother Sauces Examples: Mornay (from Béchamel), Supreme (from Velouté), Demi-glaze (from Espagnole), Bearnaise (from Hollandaise), Creole (from Tomato).
5. Rectification & Finishing of Sauces - Practice reducing, straining, deglazing, enriching, seasoning.
6. Preparation & Classification of Basic Soups.
7. Preparation of Dry & Wet Masalas

8. Preparation of Proprietary Masala Blends

Reference Books:

- **“Theory of Catering”** – Ceserani & Kinton
- **“Practical Cookery”** – Kinton, Ceserani & Foskett
- **“Professional Cooking”** – Wayne Gisslen
- **“The Professional Chef”** – The Culinary Institute of America (CIA)
- **Sauces: Classical and Contemporary Sauce Making** – James Peterson

SHIVAJI UNIVERSITY, KOLHAPUR

B. Voc. Part I Sem. II: Advanced Diploma in Catering and Hospitality Management

NEP 2020 (2.0)

(Course - II) DSC– I B. Voc. Paper I

Food and Beverage Service II

Theory: 30 Hours

(Credits: 02)

Unit I; Types of Meals

(8 hours)

1. Breakfast Introduction, Types, Service Methods,
2. Brunch
3. Lunch
4. Hi Tea
5. Dinner
6. Supper

Unit II Menu knowledge

(7 hours)

1. Introduction
2. Types -Ala Carte & Table D'hôte
3. Menu Planning, considerations and constraints
4. Menu Terms. Classical French Menu. .
5. Classical Foods & its Accompaniments with Cover.

Unit III: Non-alcoholic Beverages

(8 hours)

1. Stimulating Tea, Coffee, Cocoa
2. Nourishing Health drinks
3. Refreshing Juices, Squashes, Crushes, Syrup
4. Mineral water & carbonated drinks
5. Classification Chart Alcoholic & Non alcoholic drinks

Unit IV: Cigars & Cigarettes

(7 hours)

1. Theory Introduction to Cigars and Cigarettes
2. Brands & codes
3. Service Procedures

Reference Books:

- Food & Beverage Service –Lillicrap & Cousins
- Modern Restaurant Service -John Fuller
- Food & Beverage Service Training Manual Sudhir Andrews, Tata McGraw Hill

- The Restaurant (from Concept to Operation) -Lipinski
- Bar and Beverage Book -C. Katsigris, Mary Porter

SHIVAJI UNIVERSITY, KOLHAPUR

B. Voc. Part I Sem. II: Advanced Diploma in Catering and Hospitality management

NEP 2020 (2.0)

(Course - II) DSC– I B. Voc. Paper II

Housekeeping Operation I

Theory: 30 Hours

(Credits: 02)

Unit I: Introduction To Housekeeping

(8 hours)

1. Importance & functions of housekeeping
2. Layout of housekeeping department
3. Co-ordination with other department- front office, kitchen, F & B and other department

Unit II: Organization of Housekeeping Department

(7 hours)

1. Hierarchy in large, medium and small hotels
2. Attributes of staffs
3. Job description and job specification

Unit III: Guest rooms

(8 hours)

1. Types of guest room
2. Amenities & facilities for standard and VIP guest rooms

Unit IV: Cleaning Agents And Equipments and Key control

(7 hours)

1. Classification, use, care and storage of cleaning agent
2. Classification, use, care and storage of cleaning equipments
3. Selection and purchase criteria
4. Computerized keys
5. Manual keys
6. Key control procedures

Reference Books:

- **“Hotel Housekeeping: Operations and Management”** – G. Raghubalan & Smritee Raghubalan
- **“Housekeeping Operations, Design and Management”** – Jatashankar Tiwari
- **“Professional Housekeeping”** – Geetanjali Vohra
- **“Hotel, Hostel and Hospital Housekeeping”** – Joan C. Branson & Margaret Lenno

SHIVAJI UNIVERSITY, KOLHAPUR
B. Voc. Part I Sem. II: Advanced Diploma in Catering and Hospitality Management
NEP 2020 (2.0)

(Course - II) Practical B. Voc. Paper III
Food and Beverage Service II and Housekeeping operation-I (Practical)

Theory: 30 Hours

(Credits

List of Practical's:

Group – I

Practicals based on Food and Beverage Service II

1. Layout of English, Continental, and American breakfast covers.
2. Brunch, Lunch & Hi-Tea Service- Setting up table for brunch and lunch.
3. Dinner & Supper Service- Formal table d'hôte dinner service with multi-course menu.
4. Preparation of Menu Cards
5. Classical French Menu & Terms- Design a 5-course classical French menu.
6. Food & Accompaniments with Covers- Demonstration: Roast chicken with mint sauce, Fish with tartare sauce, esserts with specific cutlery.
7. Service of Stimulating Drinks- Brewing tea (Indian, English breakfast, green, iced).
8. Practical demonstration of cutting, lighting, and presenting cigars & cigarettes.

Group – II

Practicals based on Housekeeping operation-I

1. Departmental Layout & Function Study - Visit a hotel housekeeping department (or lab), Draw layout (linen room, laundry, store, control desk, HK manager's office).
2. Coordination Exercise- Role play: Housekeeping coordination with Front Office (room readiness), Kitchen (uniforms, stewarding), F&B (banquet linen), Maintenance (repairs). Prepare a coordination chart.
3. Draw hierarchy of housekeeping department in large, medium, and small hotels.
4. Prepare job description/specification for: Room attendant, Floor supervisor, Linen keeper.
5. Room Cleaning Demonstration
6. Identification & Classification of Cleaning Agents- Collect samples (detergents, abrasives, polishes, solvents, disinfectants).

7. Demonstration of handling keys: grand master, floor master, sub-master, guestroom keys.
8. Selection & Purchase Criteria Exercise - Compare cleaning equipment from two suppliers.

Reference Books;

- Raghubalan, G. & Smritee Raghubalan – *Hotel Housekeeping: Operations and Management*
- Sudhir Andrews – *Textbook of Housekeeping Management*
- Sudhir Andrews – *Hotel Housekeeping Training Manual*
- Dennis R. Lillicrap, John A. Cousins & Robert C. Smith – *Food & Beverage Service*
- Sudhir Andrews – *Food & Beverage Service: Training Manual*
- S. N. Bagchi – *Professional Guide to Food & Beverage Service*

SHIVAJI UNIVERSITY, KOLHAPUR

B. Voc. Part I Sem. II: Advanced Diploma in catering and Hospitality Management

NEP 2020 (2.0)

(Course - III) DSC– I B. Voc. Paper I

Hospitality Management and Customer Relationship

Theory: 30 Hours

(Credits

Unit: 1 Introduction to Hospitality Industry & Management

(8 hours)

1. Concept and scope of hospitality management
2. Characteristics of the hospitality industry
3. Sectors: lodging, food service, travel & tourism, events, allied services
4. Emerging trends in hospitality (sustainability, technology, wellness tourism)

Unit: 2 Fundamentals of Customer Relationship Management (CRM)

(7 hours)

1. Definition, scope, and importance of CRM in hospitality
2. Principles of customer care and service quality
3. Service encounters: moments of truth
4. Guest expectations and perception of service quality
5. Service recovery – handling complaints and feedback
6. Role of emotional intelligence in guest interaction

Unit: 3 CRM Strategies in Hospitality Operations

(8 hours)

1. RM in front office, housekeeping, food & beverage, and sales
2. Loyalty programs, guest history, and repeat business strategies
3. Use of technology in CRM (PMS, CRM software, mobile apps, chatbots, AI)
4. Personalization of services (VIP guests, special occasions, cultural sensitivity)
5. Case studies of successful hospitality CRM practices

Unit: 4 Managing Guest Experience & Relationship Marketing

(7 hours)

1. Guest satisfaction measurement tools (surveys, reviews, mystery audits)
2. Online reputation management (TripAdvisor, Google reviews, social media)
3. Service quality models (SERVQUAL, GAP model)
4. Relationship marketing in hospitality
5. Ethics in hospitality management and customer relations

6. Future trends: AI-driven hospitality, contactless service, sustainable guest relations

Reference Books:

- Michael J. Boella & Alan P. Wheaton – *Human Resource Management in the Hospitality Industry*
- Michael J. O’Fallon & Denney G. Rutherford – *Hotel Management and Operations*
- James A. Bardi – *Hotel Front Office Management*
- Jagdish N. Sheth, Atul Parvatiyar & G. Shainesh – *Customer Relationship Management: Emerging Concepts, Tools & Applications*
- Buttle, Francis & Stan Maklan – *Customer Relationship Management: Concepts and Technologies*
- Zemke, Ron & Chip Bell – *Knock Your Socks Off Service* (service excellence focus)

SHIVAJI UNIVERSITY, KOLHAPUR

B. Voc. Part I Sem. II: Advanced Diploma in Catering and Hospitality Management

NEP 2020 (2.0)

**(Course - III) DSC– II B. Voc. Paper II
Event Management and Banquet Operations**

Theory: 30 Hours

(Credits

Unit: 1 Introduction to Event Management (8 hours)

1. Definition and scope of event management
2. Types of events: corporate, social, cultural, sports, exhibitions, weddings, and conference
3. Role of event manager and team structure
4. Event planning process: concept, design, planning, implementation, evaluation
5. Emerging trends in event management (virtual events, hybrid events, sustainability)

Unit 2: Banquet Operations Management (7 Hours)

1. Introduction to banquets and catering services
2. Types of banquet events: breakfast, lunch, dinner, cocktail, buffet, theme events
3. Banquet facilities and layouts: seating arrangements, floor plans, staging, audiovisual setup
4. Coordination with kitchen, F&B, and housekeeping
5. Banquet service styles: plated service, buffet, family-style, cocktail service

Unit 3: Planning & Execution of Events (8 Hours)

1. Event proposal and budgeting: cost estimation, pricing, and revenue management
2. Resource planning: manpower, equipment, décor, lighting, sound, furniture
3. Scheduling and timeline management
4. Vendor management: liaising with florists, decorators, audiovisual providers, and transport
5. Risk management, safety, and legal considerations

Unit 4: Customer Relationship & Evaluation in Events (7 Hours)

1. Guest management: registration, invitations, seating charts, VIP management
2. Service quality, guest satisfaction, and complaint handling
3. Post-event evaluation: feedback collection, reporting, and documentation
4. Marketing & promotion of events: social media, PR, collaborations
5. Trends in experiential and destination events

Reference Books:

- Shone, Adrian & Parry, Bryn – *Successful Event Management*
- Goldblatt, Joe – *Special Events: Creating and Sustaining a New World for Celebration*
- Bowdin, Gareth et al. – *Events Management*
- Julia Rutherford Silvers – *Professional Event Coordination*
- Sudhir Andrews – *Food & Beverage Service and Catering Management*
- Goldblatt, Joe – *Special Events: The Art and Science of Celebration*

SHIVAJI UNIVERSITY, KOLHAPUR
B. Voc. Part I Sem. II: Advanced Diploma in Catering and Hospitality Management
NEP 2020 (2.0)
(Course - III) DSC–Practical B. Voc. Paper III
Hospitality Management and Customer Relationship and Event Management and Banquet Operations

Theory: 30 Hours

(Credits:02)

List of Practical's:

Group – I

Practicals Based on Hospitality Management and Customer Relationship

1. Identify different departments (Front Office, Housekeeping, F&B, Sales, Maintenance) in hotels.
2. Management Function Exercise- Case study: Analyze a hotel scenario
3. Guest Service Role Play- Simulate front office / F&B guest interactions. Practice greeting, handling inquiries, and providing information.
4. Complaint Handling Exercise- Practice active listening, apology, solution offering, and follow-up.
5. Guest Loyalty Program Simulation- Design a loyalty program for a hotel (points, rewards, tiers).
6. Prepare guest profiles with preferences, special requests, or VIP information
7. Practice using PMS or simulated CRM software Generate guest reports and service suggestions.
8. Examine hotel reviews on TripAdvisor/Google (real or sample data).

Practicals Based on Event Management and Banquet Operations

1. Event Concept Planning Exercise -Prepare concept notes including theme, objectives, and target audience.
2. Prepare an event management team chart.

3. Design floor plan for a banquet: seating arrangement, stage, dance floor, buffet counters, AV setup.
4. Practice setting up tables for different service styles: plated service, buffet, family-style, cocktail.
5. Role play banquet service: welcoming guests, serving food & beverages, clearing tables, and handling special requests.
6. Prepare budget for a mock event: venue, F&B, décor, entertainment, staffing, and contingency.
7. Prepare checklist of vendor deliverables and timelines.
8. Prepare a Gantt chart or timeline for the event day, Include setup, event activities, meals, speeches, entertainment, and teardown.

Reference Books:

- Adrian Shone & Bryn Parry – *Successful Event Management*
- Joe Goldblatt – *Special Events: Creating and Sustaining a New World for Celebration*
- Julia Rutherford Silvers – *Professional Event Coordination*
- Gareth Bowdin, Johnny Allen et al. – *Events Management*
- Sudhir Andrews – *Food & Beverage Service and Catering Management*
- G. Raghubalan & Smritee Raghubalan – *Hotel Housekeeping and Banquet Operations*

SHIVAJI UNIVERSITY, KOLHAPUR
B. Voc. Part I Sem. II: Advanced Diploma in Catering and Hospitality Management
NEP 2020 (2.0)

OPEN ELECTIVE – II (Theory)
Computer Application in Hospitality

Theory: 30 Hours

(Credits

Unit:1 Fundamentals of Computer in Hospitality

(15 Hours)

1. Introduction to computers and their role in hospitality management
2. Hardware and software components relevant to hospitality operations
3. Operating systems and application software used in hotels
4. Introduction to databases and data management
5. Use of spreadsheets (MS Excel/Google Sheets) for budgeting, inventory, and reporting
6. Internet and email applications in hotel communication and bookings
7. Basic cybersecurity and data protection in hospitality

Unit:2 Hospitality Software & Applications

(15 Hours)

1. Property Management System (PMS): features, front office management, reservations, check-in/check-out
2. Point of Sale (POS) systems in Food & Beverage operations
3. Customer Relationship Management (CRM) software for guest history, loyalty programs, and feedback
4. Event management software for planning, scheduling, and reporting
5. Inventory and procurement management systems
6. Reporting and analytics tools for performance monitoring
7. Emerging technologies: mobile apps, cloud computing, AI, and automation in hospitality

Reference Book:

- Peter Jones – *Hospitality Information Technology: Learning to Manage IT in the Hospitality Industry*
- Michael L. Kasavana & John J. Cahill – *Managing Front Office Operations*
- G. Raghubalan & Smritee Raghubalan – *Hotel Management and Operations*
- Sudhir Andrews – *Introduction to Hospitality Management*
- Lucas, Robert W. – *Information Technology for the Hospitality Industry*

SHIVAJI UNIVERSITY, KOLHAPUR

B. Voc. Part I Sem. II: Advanced Diploma In Catering and Hospitality Management , NEP 2020 (2.0)

VEC

**Democracy, Election and Constitution
(Credits: 02)**

Compulsory to all B. Voc courses

SHIVAJI UNIVERSITY, KOLHAPUR

B. Voc. Part I (Advanced Diploma In Catering and Hospitality Management) NEP

2020 (2.0) Semester – I & II : Theory

Nature of a Question Paper

Time: 1:00 Hrs.

Total Marks: 30

Solve questions from the following.

Q. 1 Multiple choice Question

10 Marks

- i.
- ii.
- iii.
- iv.
- v.
- vi.

Q. 2 Long answer Question (Any one out of two)

10 Marks

- i.
- ii.
- iii.

Q. 3 Short Answer Questions (Any two out of four)

10 Marks

- i.
- ii.
- iii.
- iv.
- v.
- vi.

Internal Assessment

20 Marks

Home Assignment
Class Assignment (Tutorial Type)
Quiz
Mid-Term Test

Nature of Practical Question Paper

Internal practical examination	50 marks
1. Group I	20 Marks
2. Group II	20 Marks
3. Submission of Certified Journal	10 Marks

Assessment:

The NEP 2020 emphasizes upon formative and continuous assessment rather than summative assessment. Therefore, the scheme of assessment should have components of these two types of assessments. Assessment has to have correlations with the learning outcomes that are to be achieved by a student after completion of the course

- a) **Continuous Assessment:** Assignments, projects, presentations, seminars and quizzes
- b) **Examinations:** Midterm, finals, or comprehensive exams.
- c) **Research Projects/Dissertation/Thesis:** Evaluated through submission and viva-voce
- d) **Grading System:** Standardized letter grades, percentages, or CGPA

Letter Grades and Grade Points:

The Semester Grade Point Average (SGPA) is computed from the grades as a measure of the student's performance in a given semester. The SGPA is based on the grades of the current term, while the Cumulative GPA (CGPA) is based on the grades in all courses taken after joining the programme of study. The HEIs may also mention marks obtained in each course and a weighted average of marks based on marks obtained in all the semesters taken together for the benefit of students.

Computation of SGPA and CGPA: UGC recommends the following procedure to compute the Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA)

Letter Grade	Grade Point
O (Outstanding)	10
A+ (Excellent)	9
A (Very Good)	8
B+ (Good)	7
B (Above Average)	6
C (Average)	5
P (Pass)	4
F (Fail)	0
Ab (Absent)	0

1. The SGPA is the ratio of the sum of the product of the number of credits with the grade points scored by a student in all the courses taken by a student and the sum of the number of credits of all the courses undergone by a student, i.e.

$$\text{SGPA (S}_i\text{)} = \frac{\sum (C_{ix}G_i)}{\sum C_i}$$

Where C_i is the number of credits of the i^{th} course and G_i is the grade point scored by the student in the i^{th} course.
