CURRICULUM

DIPLOMA

Beauty and Cosmetology

(Three Year's Program - Semester System)

Council for Technical Education and Vocational Training
Curriculum Development Division
Sanothimi, Bhaktapur
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Introduction:

This curriculum is designed to produce technical workforce equipped with knowledge, skills and attitudes related to the field of beauty and cosmetology to meet the present demand in the country and aboard. Graduates of this course will be capable of performing as per the need of national and international labour market. The curriculum focuses on the enhancement of the required skills, enabling techniques and competency building in the concerned sector.

Diploma in Beauty and cosmetology program extends over three years. Each year is divided into two semesters. There are six semesters in three years including one semester (6 months) work experience program. The first year course includes both foundational subjects like English, Nepali, mathematics and sciences for developing interpersonal communication, academic foundation and scientific base. It includes disciplinary subjects like fundamentals of beauty and cosmetology make up, nail beautification, hair care, hair treatment, hair chemicals, facial make up as well as medical subjects like anatomy and physiology of hair, nail & skin and diet and nutrition both theoretical and practical. The second year course provides more advance and in-depth knowledge on the similar disciplinary and auxiliary subjects like make up, nail, beautification, hair care, hair treatment, hair chemicals, ecology and environment, facial, dermatological diseases, cosmoceutical pharmacology both theoretically and practically. Similarly, the third year comprises of the disciplinary subjects and application of learnt skills and knowledge in the work experience program practically.

Curriculum Title:

Diploma in Beauty and Cosmetology

Aim:

The program aims at preparing competent workforce in the field of Beauty and Cosmetology.

Program Objectives:

This program has following objectives to:

1. Prepare beauty and cosmetology technicians capable of undertaking the care and treatment of skin, hair and nail;
2. Provide high quality beauty and cosmetology services and assure the quality of services offered to the customer;
3. Prepare technical workforce having positive attitude and respect towards the profession with greater initiative;
4. Reduce the health hazards due to the service provided by untrained/unskilled human resources;
5. Fulfill the demand of required beauty and cosmetology Technicians for the public and private sector of Nepal;
6. Create self-employment opportunities.

Target Location:

The target location of this program will be all over Nepal.

Group Size:

The group size will be maximum of 40 (forty) in a batch.

Entry Criteria:

- SLC Pass or SLC/SEE with minimum C grade in any two subjects and D+ in any one subjects of Compulsory Mathematics, English & Science.
- Should pass entrance examination administered by CTEVT.

Duration:

The total duration of this program is three years. The program is based on semester system. Moreover, one semester consists of 15 to 19.5 weeks and one academic week consists of up to 40 hours including evaluation period. Actual teaching learning hours will be not less than 15 weeks in each semester.

Medium of Instruction:

The medium of instruction will be in English and Nepali.

Pattern of Attendance:

Minimum of 90% attendance in each subject is required to appear in the respective final examination.

Teacher and Student Ratio

The ratio between teachers and students must be:

- Overall ratio of teacher and student must be 1:10 (at the institution level)
- 1:40 for theory and tutorial classes
- 1:10 for practical classes

Qualification of Teachers and Instructors:

- The program coordinator should be a master's degree holder in the related area.
- The disciplinary subject related teacher should be a bachelor's degree holder in the related area.
- The demonstrators should be diploma degree holder in the related area with three years experiences in training activities.
- The foundational subject related teacher should be master's degree holder in the related area.

Instructional Media and Materials:

The following instructional media and materials are suggested for the effective instruction and demonstration.

- ***Printed Media Materials*** (Assignment sheets, Hand-outs, Information sheets, Individual training packets, Procedure sheets, Performance Check lists, Textbooks etc.).
- ***Non-projected Media Materials*** (Display, models, Flip chart, Poster, Writing board etc.).
- ***Projected Media Materials*** (Opaque projections, Overhead transparencies, Slides etc.).
- ***Audio-Visual Materials*** (Audiotapes, Films, Slide-tape programs, Videodiscs, Videotapes etc.).
- ***Computer-Based Instructional Materials*** (Computer-based training, Interactive video etc.)

Teaching Learning Methodologies:

The methods of teachings for this curricular program will be a combination of several approaches such as; illustrated lecture, tutorial, group discussion, demonstration, simulation, guided practice, fieldwork, block study, industrial practice, report writing, term paper presentation, heuristic and other independent learning exercises.

Mode of Education:

There will be inductive and deductive mode of education.

Examination and Marking Scheme:

a. Internal assessment

- There will be a transparent/fair evaluation system for each subject both in theory and practical exposure.
- Each subject will have internal assessment at regular intervals and students will get the feedback about it.
- Weightage of theory and practical marks are mentioned in course structure.
- Continuous assessment format will be developed and applied by the evaluators for evaluating student's performance in the subjects related to the practical experience.

b. Final examination

- Weightage of theory and practical marks are mentioned in structure.
- Students must pass in all subjects both in theory and practical for certification. If a student becomes unable to succeed in any subject s/he will appear in the re-examination administered by CTEVT.
- Students will be allowed to appear in the final examination only after completing the internal assessment requirements.

c. Requirement for final practical examination

- Professional of relevant subject instructor must evaluate final practical examinations.
- One evaluator can evaluate only 20 students in one setting.
- Practical examination should be administered in actual situation on relevant subject with the provision of at least one internal evaluator from the concerned or affiliating institute led by external evaluator nominated by CTEVT.
- Provision of re-examination will be as per CTEVT policy.

d. Final practicum evaluation will be based on:

- Institutional practicum attendance - 10%
- Logbook/Practicum book maintenance - 10%
- Spot performance (assigned task/practicum performance/identification/arrangement preparation/measurement) - 40%
- Viva voce :
  - Internal examiner - 20%
  - External examiner - 20%

e. Pass marks:

- The students must secure minimum 40% marks in theory and 50% in practical. Moreover, the students must pass the internal assessment and in the semester final examination of each subject theory and practical to pass the subject.

Provision of Back Paper:

There will be the provision of back paper but a student must pass all the subjects of all years within six years from the enrollment date; however there should be provision of chance exam for final year students as per CTEVT rules.

Disciplinary and Ethical Requirements:

- Intoxication, insubordination or rudeness to peers will result in immediate suspension followed by the review of the disciplinary review committee of the institute.
- Dishonesty in academic or practical activities will result in immediate suspension followed by administrative review, with possible expulsion.

- Illicit drug use, bearing arms in institute, threats or assaults to peers, faculty or staff will result in immediate suspension, followed by administrative review with possible expulsion.

Grading System:

The following grading system will be adopted:

- Distinction: 80% and above
- First division: 65% to below 80%
- Second division: 50 % to below 65%
- Pass division: Pass marks(40%) to below 50%

Certification and Degree Awards:

- Students who have passed all the components of all subjects of all 3 years are considered to have successfully completed the course.
- Students who have successfully completed the course will be awarded with a degree of **"Diploma in Beauty and Cosmetology"**.

Career Opportunity:

The graduates will be eligible for the position equivalent to Non-gazette 1st class/Level 5 (technical) as "Beauty and cosmetologist" or as prescribed by the Public Service Commission of Nepal and other related agencies. The graduate will be eligible for registration with the related licensing organization of the country (if any).

Course Structure
Diploma in Beauty and Cosmetology

Year I **Part I**

SEMESTER I

S.N.	Subjects	Modes			Distribution of Marks						Total Marks
					Theory			Practical			
		T	P	Total	Internal Marks	Final Marks	Exam Hours	Internal Marks	Final Marks	Exam Hours	
1	Nepali	5	0	5	20	80	3				100
2	English I	5	0	5	20	80	3				100
3	Chemistry I	5	2	7	20	60	3	10	10		100
4	Mathematics & Statistics	5	0	5	20	80	3				100
5	Physics I	5	2	7	20	60	3	10	10		100
6	Fundamental of Beauty	2	1	3	10	40	1.5				50
7	Fundamental of Cosmetology	3	0	3	10	40	1.5				50
8	Computer Application	2	2	4	10	40	1.5	20	30		100
Total		32	7	39	130	480		40	50		700

Year I **Part II**

Semester II

S. N.	Subjects	Modes			Distribution of Marks						Total Marks
		T	P	Total	Theory			Practical			
					Internal Marks	Final Marks	Exam Hours	Internal Marks	Final Marks	Exam Hours	
1	English II	4	0	4	20	80	3	0	0		100
2	Chemistry II	5	2	7	20	60	3	10	10	3	100
3	Physics II	5	2	7	20	60	3	10	10	3	100
4	Anatomy & Physiology of skin, hair and nail	3	2	5	20	60	3	10	10	3	100
5	Removal of Superfluous Hair	2	4	6	10	40	2	20	30	3	100
6	Nail Health and Beautification	2	4	6	10	40	2	20	30	3	100
7	Diet and Nutrition	2	0	2	10	40	2	0	0		50
8	Applied Cosmetology	2	1	3	10	40	2	0	0		50
Total		25	15	40	120	420		70	90		700

Year II **Part I**

SEMESTER III

SN	Subjects	Modes			Distribution of Marks						Total Marks
		T	P	Total	Theory			Practical			
					Internal Marks	Final Marks	Exam Hours	Internal Marks	Final Marks	Exam Hours	
1	Basic Principles of Dermatology	2	2	4	10	40	2	20	30	3	100
2	Basic Hair Performances and Cutting	2	6	8	10	40	2	40	60	3	150
3	Ecology and Environment	3	0	3	10	40	2	0	0		50
4	Cosmeceutical Pharmacology	2	4	6	10	40	2	20	30	3	100
5	Henna Art and Application	2	4	6	10	40	2	20	30	3	100
6	Hair Styling and Designing	2	4	6	10	40	2	20	30	3	100
7	Occupational Health, Hygiene and Safety	2	2	4	10	40	2	20	30	3	100
Total		**15**	**22**	**37**	**70**	**280**		**120**	**180**		**700**

Year II **Part II**

SEMESTER IV

SN	Subjects	Modes			Distribution of Marks						Total Marks
		T	P	Total	Theory			Practical			
					Internal Marks	Final Marks	Exam Hours	Internal Marks	Final Marks	Exam Hours	
1	Facial Treatment I	2	4	6	10	40	2	20	30	3	100
2	Basic Makeup	2	4	6	10	40	2	20	30	3	100
3	Hair and Chemicals I	2	4	6	10	40	2	20	30	3	100
4	Advance Hair Cutting and Styling	2	6	8	10	40	2	40	60	3	150
5	Hair and Scalp Treatments	2	4	6	10	40	2	20	30	3	100
6	Common Skin Hair and Nail Diseases	4	2	6	20	60	3	10	10	3	100
Total		**14**	**24**	**38**	**70**	**260**		**110**	**160**		**650**

Year III **Part I**

SEMESTER V

SN	Subjects	Modes			Distribution of Marks						Total Marks
		T	P	Total	Theory			Practical			
					Internal Marks	Final Marks	Exam Hours	Internal Marks	Final Marks	Exam Hours	
1	Salon Management and Business	4	0	4	20	80	3	0	0	0	100
2	Advance Makeup	2	6	8	10	40	2	40	60	3	150
3	Entrepreneurship Development	3	2	5	10	40	2	20	30	3	100
4	Spa and wellness Therapy	2	4	6	10	40	2	20	30	3	100
5	Hair and Chemicals II	2	4	6	10	40	2	20	30	3	100
6	Facial Treatment II	2	4	6	10	40	2	20	30	3	100
7	Assembled Cosmetology	2	1	3	10	40	2	0	0		50
Total		**15**	**23**	**38**	**70**	**280**		**120**	**180**		**700**

Year III **Part I**

SEMESTER VI

SN	Subjects	Modes			Distribution of Marks						Total Marks
		T	P	Total	Theory			Practical			
					Internal Marks	Final Marks	Exam Hours	Internal Marks	Final Marks	Exam Hours	
1.	Work Experience Practice (WEP)	0	40	40	0	0	0	0	0	0	500
Total		**0**	**40**	**40**	**0**	**0**	**0**	**0**	**0**	**0**	**500**

Year I Part I

Semester I

Subjects:

1. **Nepali**
2. **English I**
3. **Chemistry I**
4. **Physics I**
5. **Math**
6. **Fundamentals of Beauty**
7. **Fundamentals of cosmetology**
8. **Computer Application**

नेपाली

वर्ष : प्रथम | **पाठ्यघण्टा: ५ घण्टा/हप्ता**
सेमेस्टर : प्रथम | **सैद्धान्तिक: ५ घण्टा/हप्ता**
तह : डिप्लोमा□प्रमाणपत्र | **प्रयोगात्मक: 0 घण्टा/हप्ता**

यो पाठयांश सौन्दर्य विज्ञान (Diploma in Beauty and cosmetology) डिप्लोमा तहमा अध्ययन गर्ने विद्यार्थीह□का लागि नेपाली भाषाको व्याकरणात्मक ज्ञान र सुझको विकासका साथै पठनबोध र अभिव्यक्ति क्षमताको विकास गर्ने दृष्टिले राखिएको हो । यसलाई मुख्यत: दुई खण्डमा बांडिएको छ: व्याकरण खण्ड र बोध (अभिव्यक्ति) खण्ड । व्याकरण अन्तर्गत शब्दवर्ग, □पायन, शब्द निर्माण र वाक्यसम्बन्धी पाठ्यवस्तुह□ राखिएका छन् भने बोध□अभिव्यक्तिअन्तर्गत सामान्यबोध र प्रयोजनपरक बोधका साथै अभिव्यक्ति रचनाका लागि अपेक्षित सीपह□ र समीक्षाका लागि साहित्यिक विधाका पाठह□ समाविष्ट छन् ।

पाठ्यांशको उद्देश्य:

यो पाठ्यांश पूरा गरेपछि विद्यार्थीह□ निम्नलिखित कुरामा सक्षम हुनेछन् :

१. कथ्यभाषा र लेख्यभाषाका बीचको भिन्नता पहिल्याउन ।
२. अभिव्यक्तिमा प्रयोग हुने शब्दहरुको उपयुक्त वर्णविन्यास लेख्न ।
३. शब्दह□कास्रोत, बनोट र वर्ग-पहिचान गर्न, □पायन गर्न र निर्माण गर्न ।
४. वाक्यतत्व र वाक्यान्तरणका कडीह□ बुझेर आफ्ना अभिव्यक्तिमा तिनको उपयुक्त प्रयोग गर्न ।
५. खास वाक्यतत्वसंग सम्बद्ध ढांचा र सन्दर्भका आधारमा अनुच्छेद रचना गर्न ।
६. स्तर अनु□प पाठ्यसामग्रीमा प्रयुक्त शब्दह□का आधारमा शब्दभण्डारको विस्तार गर्न ।
७. बोध र संक्षेपीकरणका पाठ्यसामग्रीमा प्रयुक्त शब्दह□का आधारमा शब्दभण्डारको विस्तार गर्न ।
८. ज्ञान-विज्ञानका विभिन्न शीर्षकह□मा स्वतन्त्र □पमा अनुच्छेद र निबन्ध रचना गर्न ।
९. तोकिएका आधारमा साहित्यिक कृतिह□को समीक्षा गर्न ।

खण्ड क: नेपाली व्याकरण

पाठ्यघण्टा : ४० **पूर्णाङ्क : ५०**

एकाइ १: शब्द भण्डार: पाठ्यघण्टा : २५ अंक: ३०

१.१ शब्दवर्ग, शब्दरूपायन र शब्द निर्माण पाठ्यघण्टा : १५ अंक: २०

- स्रोतका आधारमा शब्दहरुको परिचय, पहिचान र प्रकार
- व्युत्पादनका आधारमा शब्दहरुको परिचय, पहिचान र प्रकार
- शब्दवर्ग: नाम, सर्वनाम विशेषण, क्रियापद, नामयोगी, क्रियायोगी, संयोजक, विस्मयादिवोधक र निपातहरूको पहिचान अभ्यास
- शब्दरूपायन: नाम, सर्वनाम र विशेषणको लिङ्ग, वचन, आदर, कारकका आधारमा तथा क्रियापदको लिङ्ग, वचन, पुरूष, आदर, काल, पक्ष, भाव, वाच्य र अकरणका आधारमा शब्दरूपायनको अभ्यास ।

१.२ शब्द निर्माण अभ्यास पाठ्यघण्टा : ५ अंक ५

- निम्नलिखित उपसर्गहरुद्धारा शब्दनिर्माणको अभ्यास
  प्र, अप, सम्, अनु, वि, अधि, उत्, प्रति, परि, उप, सु, नि, निर, दुर्, अ, अन, कु ।
- निम्नलिखित कृत् प्रत्ययद्धारा शब्दनिर्माणको अभ्यास :
  आइ, ओट, ओ, आउ, आहा, अक्कड, उवा, इलो ।
  अक, अन ई इत, य, तव्य ।
- निम्नलिखित तद्धित प्रत्ययहरुद्धारा शब्दनिर्माणको अभ्यास :
  आइ, आली, इया, इलो, ई, ए, एली, ली, ले ।
  इक, ई, ईय, इत, ता, त्व, मान, वान, आलु ।

१.३ समास पाठ्यघण्टा : ५ अंक ५

- समस्त शब्दहरुको पहिचान
- तत्पुरुष, कर्मधारण, □ा, □□ अव्ययीभाव, र वहूब्रीहिको प्रक्रियाबाट समस्त शब्दहरुको निर्माण गर्ने अभ्यास

एकाइ २: वाक्यतत्व पाठ्यघण्टा : २० अंक: २०

(क) वाक्यत्तत्व: उद्देश्य र विधेयको पहिचान **पाठ्यघण्टा : १० अंक: १०**

- क्रिया र यसका प्रकार
- वाक्यका प्रकार: सरल र जटिल वाक्यको पहिचान
- वाक्य संश्लेषण र विश्लेषण
- लि□, वचन, पुरुष र आदरका आधारमा कर्ता र क्रियापदका बीचको स□ति सम्बन्धी अभ्यास
- विशेष्य र विशेषण र नाम र सर्वनामको बीचको स□ति सम्बन्धी अभ्यास
- विभक्तिनियम तथा ले, लाई, देखि, बाट, □रा, को, का, की, रो, रा, री, नो, ना, नी, मा आदि विभक्ति प्रयोगको अभ्यास

एकाइ ३ : वाक्यान्तरण : पाठ्यघण्टा : ५ अंक १०

विभिन्न काल, पक्ष, भाव, अकरण, वाच्य, प्रेरणार्थक, उक्ति आदिमा वाक्यान्तरण गर्ने अभ्यास

खण्ड ख: बोध तथा अभिव्यक्ति पाठ्यघण्टा : ३५ पूर्णाङ्क : ५०

क. बोध र अभिव्यक्ति पाठ्यघण्टा : २० अंक: २५

- सौन्दर्य विज्ञान सम्बन्धि गद्यांशहरूको बोध र शब्दभण्डारको अभ्यास
- अनुच्छेद लेखन (सौन्दर्य विज्ञानसंग सम्बन्धित)
- पत्र, निवेदन,
- विज्ञापन लेखन
- निबन्ध लेखन
- प्रतिवेदन लेखन

ख. कृति समीक्षा : पाठघण्टा : १५ अंक: २५

विषयवस्तु, कथानक, पात्र, परिवेश, सन्देश, शीर्षक र भाषा शैलीका आधारमा निम्नलिखित रचनाहरूको समीक्षात्मक अभ्यास:

कथा :

- गुरू प्रसाद मैनाली छिमेकी
- विश्वेश्वरप्रसाद कोइराला सिपाही
- इन्द्रबहादुर राई रातभरि हुरी चल्यो
- रमेश विकल मधुमालतीको कथा

निवन्ध :

- लक्ष्मी प्रसाद देवकोटा पहाडी जीवन
- शंकर लामिछाने एक पत्र सम्पादकलाई
- भैरव अर्याल महापुरूषको संगत

कविता :

- लेखनाथ पौडेल नैतिक दृष्टान्त
- पारिजात मानूषी
- गोपाल प्रसाद रिमाल आमाको सपना
- माधव प्रसाद घिमिरे नेपालै नरहे

नाटक :

- विजय मल्ल बहुला काजीको सपना

<u>सहायक पूस्तकहरू (सम्बद्ध अंश मात्र)</u>:

- मोहनराज शर्मा, शब्द रचना र वर्ण विन्यास वाक्यत्तत्व र अभिव्यक्ति, काठमाण्डौ बुक सेन्टर, काठमाण्डौ ।
- चित्र कुमार गुरूङ्ग एम्.एस्सी.र केदार न्यौपाने एम्.ए., प्राविधिक शब्दार्थावली (चिकित्सा तथा विज्ञान खण्ड), त्रिभुवन विश्वविद्यालय, चिकित्सा शाश्त्र अध्ययन संस्थान, अनुसन्धान शाखा, महाराजगंज, काठमाण्डौ ।
- त्रि.वि. पाठ्यक्रम विकास केन्द्र, अनिवार्य नेपाली शिक्षण निर्देशन, काठमाण्डौ
- सागरमणि पाण्डेय, ईश्वरी पाण्डेय, अनिवार्य नेपाली, रत्नसागर प्रा.लि., काठमाण्डौ
- टीकाहरि बराल र अन्य, सीटीइभीटी अनिवार्य नेपाली, अस्मिता पब्लिकेशन, काठमाडौं

English I

Year: 1st **Part: I** **Semester: I** **Program : Diploma in Beauty and cosmetology**	**Total: 5 hrs/W (75 hrs)** **Theory: 5 hrs/W (75 hrs)** **Practical: 0 hrs/W (hrs)**

Course Description

This is an integrated general English course, which treats English as a medium for communication and as a means to acquire knowledge and skill related to beauty and cosmetology. It provides a remedial refresher course including Basic English grammar and structures and use of a dictionary, tools for receiving and imparting information effectively, and exposure to poems, essays and stories which are interesting and informative topics of global interest. This course provides a bridge between secondary and university English.

Course Objectives

On completion of the course student will be enabled to:

- Use English for academic and communicative purposes.
- Demonstrate functional, notional and grammatical skill in English language usage.
- Use English structures in informal communication.
- Analyze the prescribed texts related to different literary genres.
- Answer the questions based on the reading texts.
- Produce different types of free compositions.

Course Contents:

Part 1: Grammar **Theory Time:** **40 hrs**

Unit 1: Link English **Theory Time:** **8 hrs**

Objectives:

- Use English dictionary appropriately
- Differentiate American and British English spelling
- Enrich English vocabulary
- Form English sentences correctly

Contents

- Dictionary Skills: Alphabetic order, dictionary quarter system, guide words, head words etc.
- British and American English: spelling differences
- Word formation process through affixes (prefix and suffix), vocabulary
- Sentence formation

Unit 2: Comparison **Theory Time:** **8 hrs**

Objectives

- Apply the structures for making comparisons using adjectives and adverbs

Contents

- Comparatives and superlatives forms of Adjectives
- Comparative and superlatives and there uses
- Other ways of comparing things
- Communication skills
- Writing skills

Unit 3: Prepositions **Theory Time: 6 hrs**

Objectives
- Apply the prepositions ‘in’, ‘on’ and ‘at’ in different contexts.

Contents
- Prepositions of Place: on, in, at
- Prepositions of Time: on, in, at
- Prepositions with forms of transport
- Communication skills
- Writing skills

Unit 4: Tenses **Theory Time: 6 hrs**

Objectives
- Use present tenses, past tenses and perfect tenses in different situations.
- Talk about the future using ‘will’ and ‘going to’
- Talk about the future using present tense

Contents
Auxiliary verbs: be, have, do
- The Present Tenses
- The past tenses
- The perfect tense
- Talking about the present tense
- Talking about the past
- Reporting the past
- Talking about the future using ‘will’ and ‘going to’
- Talking about the future using present tense
- Communication skills
- Writing skills

Unit 5: Mood **Theory Time: 6 hrs**

Objectives
- Apply the structures for making yes/no questions beginning with auxiliary or modal.
- Use Question tags
- Use indirect questions to ask for information or help.
- Use negative sentence with “not”

Contents
Questions
- Wh – words
- Question tags- forms
- Question tags – uses
- Indirect and reported questions
- Negative sentence with “not”
- Communication skills
- Writing skills

Unit 6: Modals **Theory Time: 6 hrs**

Objectives
- Introduce modals
- Use modals for probability, certainty, permission, instructions, request and suggestions.

Contents
- Instructions to modals
- Modal negative and questions
- Can/ could, may/ might- possibility
- Cannot, can’t, must, ought to, should, will- probability and certainty.
- Can, could, may – permission
- Can/could, will/ would – Instructions and requests
- Can/could, might, shall – suggestions
- Communication skills
- Writing skills

Part 2: Extensive reading (Literature) **Theory Time: 35 hrs**

The Magic of Words (collection of poetry, essays, prose)

Objectives	**Contents**
Unit 1: Poems	**Theory hrs. (10 hrs)** My Heart Leaps Up When I Behold, William Wordsworth The Poplar Field, William Cowper
Unit 2: Supernatural Stories	**Theory hrs. (9 hrs)** The Recurring Dream The Lost Doll
Unit 3: Stories	**Theory hrs. (8 hrs)** A Worn Path, Eudora Welty
Unit 4: Essays	**Theory hrs. (8 hrs)** Speaking of Children, Barbara Holland The Nightmare Life Without Fuel, Isaac Asimov

Text book:

General English, 2017, Curriculum Development Division, CTEVT, Sanothimi, Bhaktapur

References:

1. Link English, Sajha Prakashan,
2. The Magic of Words (collection of poetry, essays, prose)
3. Intermediate English grammar, Raymond Murphy, Cambridge university press.

Chemistry I

Year: 1st	**Total: 7 hrs/W (105 hrs)**
Part: I	**Theory: 5 hrs/W (75 hrs)**
Semester: I	**Practical: 2 hrs/W (30 hrs)**
Program : Diploma in Beauty and cosmetology	

Course Description

This course is designed to meet the fundamental needs of chemical knowledge required for the diploma level students of Beauty and Cosmetology and it is strengthened by the practical approach of materials essentially relevant to utilitarian aspects of the field. The course covers the core curricular contents of General and Physical Chemistry, Organic Chemistry, Inorganic Chemistry and Environmental Chemistry.

General Objectives of the course

1. To provide the students with conceptual understanding of fundamental areas of Chemistry.
2. To disseminate the knowledge based practical activities and learning experiences among the students.
3. To develop the skills of record keeping with proper organization of practical.
4. To make the students search and apply Chemistry for betterment in the field of health and beauty enhancement.
5. To train the brain of students for enquiry based invigoration of their potential in application of Chemistry in their job and professional situation.
6. To make students able to make proper use of cosmetic compounds with understanding of their topical use, adverse effects and environmental hazards.

Course Contents

Section A: General and Physical Chemistry

Unit 1: Language of Chemistry and Chemical Arithmetic 8 hours

Element, symbol, valency, variable valency, radical and types of radical.
Molecular formula and empirical formula, significance of symbol and formula.
Compound, pure and impure substances, Chemical reaction and chemical equation, essentials of chemical equation, balancing chemical equation by hit and trial method.
Atomic weight, molecular weight, mole concept (mass-mass, mass-volume and volume-volume relations) and related numericals, Avogadro's hypothesis.

Unit 2 : True solution, colloid and suspension 4 hours

Solution: Introduction, types, solubility, solubility product, solubility curves, Henry's law, osmosis, osmotic pressure, hypotonic, hypertonic and isotonic solution, biological importance of osmosis

Colloid: Introduction, lyophilic and lyophobic solution, coagulation of solution by boiling, electrophoresis, addition of electrolyte, dialysis, dermatological and topical applications of colloid, emulsion and gel , topical and pharmaceutical uses of emulsion and gel.

Unit 3: Physical Techniques of Separation of Mixture **3 hours**

Separation of insoluble impurities: filtration, decantation, precipitation
Separation of soluble impurities: distillation, crystallization, Separation by sublimation.

Unit 4: States of Matter **6 hours**

Solid state: General characteristics, crystalline and amorphous solid, water of crystallization, hydrated and non-hydrated crystal and anhydrous solid, efflorescent and deliquescent solid

Liquid state: General characteristics, introduction of viscosity and surface tension, effects of viscosity and surface tension

Gaseous state: General characteristics, postulates of kinetic model of gases, illustration of Boyle's law, Charles' law and ideal gas equation

Unit 5: Atomic Structure and Electronic Theory of Valency **8 hours**

Fundamental particles of atom, atomic number, atomic weight, isotopes, isobars, Rutherford's atomic model and its limitations, postulates of Bohr's model, Hund's rule. Afbau's principle, subshell notation (up to atomic number 30)
Assumptions of electronic theory of valency, electrovalency, covalency, coordinate covalency, hydrogen bonding and its effects.

Unit 6: Periodic Classification of Elements **5 hours**

Periodicity, Necessity of periodic classification, Old periodic law and Mendeleev's periodic table, Modern periodic law and long form of periodic table, advantages of modern periodic table over old periodic table, periodic variation of atomic radii, electronegativity, ionization potential and electron affinity

Unit 7: Oxidation and Reduction **5 hours**

Classical concept, electronic concept, oxidation number, redox reaction, oxidizing agent, reducing agent, redox phenomena: combustion of glucose, internal respiration, bleaching due to oxidation, bleaching due to reduction, non-redox reactions

Section B: Organic Chemistry

Unit 8: Introduction to Organic Chemistry **6 hours**

Definition of organic compounds, Vital force theory and its failure, organic chemistry as a separate discipline, reasons of existence of very large number of organic compounds, functional groups, homologous series, electrophiles and nucleophiles, homolytic and heterolytic bond fission

Unit 9: Nomenclature of Organic Compounds **6 hours**

IUPAC rules, nomenclature of aliphatic and non-cyclic organic compounds with single functional group

Unit 10: Aliphatic and Aromatic Hydrocarbons **5 hours**

Saturated and unsaturated hydrocarbon, physical and chemical properties of alkane, alkene and alkyne, uses of methane, ethane and ethyne

Arene, Huckel's 4n+2 rule, physical and chemical properties of benzene, clinical uses of benzene and chlorobenzene ,Electrophilic substitution reactions of benzene (o and p directing)

Section C: Inorganic and Environmental Chemistry

Unit 11: Chemistry of nonmetals **8 hours**

Water: Hard and soft water, cause of hardness, methods of removal of hardness of water, potable water, domestic and industrial methods of purification of drinking water, solvent property of water , heavy water and its uses

Ammonia: Physical and chemical properties of ammonia, uses of ammonia, toxicity of ammonia and its medical management

Oxides of Nitrogen: formulae, uses, toxicity and its medical management

Phosphorous: occurrence, periodic position, allotropes, comparison of white and red phosphorous, uses of phosphorous, biological importance of phosphorous

Carbon monoxide: Physical and chemical properties, poisoning effect, uses

Carbon dioxide: Physical and chemical properties, uses, clinical use of dry ice

Unit 12: Chemistry of Metals **5 hours**

Metallurgy, minerals and ores, flux and slag, calcination and roasting, Chemistry of slaked lime, plaster of Paris, epsom salt, bleaching powder and calamine

Clinical management of metal poisoning (mercury, cadmium and lead)

Unit 13: Environmental Pollution **6 hours**

Sources of pollution in air:

Primary Pollutants: Water and soil, acid rain, smog, greenhouse effect,

secondary pollutants: carbonyl compounds, ozone, PAN, ozone layer depletion, damaging UV rays, UV blockers for skin and their composition, nuclear pollution, pesticide poisoning and its clinical management , skin ailments of acids, polycyclic aromatic hydrocarbons (PAHs) , particulate matter(PM), ozone and smoke, topical cure of ailments,

Skin diseases due to pollution and their clinical management:

Chemistry Practical
Teaching load: 30 hours (2 hours /weeks)

To observe safety rules in lab and identify the oxidizing and reducing flames of Bunsen burner.

1. To carry out the simple lab techniques of cutting and bending the glass tubes in acute, obtuse and right angles.
2. To prepare jet and bore a hole in cork.
3. To separate a mixture of sand and sodium chloride from their mixture.
4. To separate camphor by sublimation from a mixture of sand and camphor.
5. To study some redox reactions in lab.
6. To prepare pure and dry precipitate of barium sulphate obtained by the reaction of sulphuric acid with barium chloride.
7. To obtain pure water by distillation and check the purity of water obtained in this way.
8. To identify the acid radical of given salt by wet ways (chloride, sulphate, carbonate or nitrate).
9. To get copper sulphate crystals in pure state from bazaar copper sulphate.
10. To prepare ammonia gas in lab and study its properties.
11. To prepare carbon dioxide gas in lab and study its properties.
12. To study the chemistry of slaked lime and Epsom salt.
13. To check permanent and temporary hardness in tap water.
14. To observe and study the process of osmosis through a semipermeable membrane.

Recommended Books

- Pandit, C.N. Dr.; Chemistry Education; K.P. Publication, 4433738, Dillibazar, Kathmandu.
- Mitra,LadliMohan,A textbookof Inorganic Chemistry. Ghosh&Co.Currentedition.
- Tuli, G.D.etal.,IntermediateOrganic Chemistry. S. Chand&Co. Currentedition.
- Jauhar,S.P.,ModernABC's ofChemistry (vol.I&II).Modern Publishers. Current edition.

Reference Books

- Jha, J. S., & Gugliani, S. K., A Textbook of Chemistry. Seirya Publication, Current edition.
- Sthapit, M. & Pradhananga, R. R., Fundamentals of Chemistry (vol. I & II). Taleju Prakashar.Currentedition.
- Pandit, C. N. Dr., Subedi, R. R. and Tiwari, Prakash; A Textbook of Chemistry; K.P. Publication, Dillibazar, Kathmandu.

Physics I

Year: 1st **Part: I** **Semester: I** **Program : Diploma in Beauty and cosmetology**	**Total: 7 hrs/W (105 hrs)** **Theory: 5 hrs/W (75 hrs)** **Practical: 2 hrs/W (30 hrs)**

Course Description

This course in physics is designed to provide students with an understanding of the scientific laws of our physical world, and how physics contributes to life's activities in modern society. The course emphasizes both quantitative and qualitative aspects of physics, involving mathematical models and equations. The application of physics to social and environmental situations is well illustrated.

The practical component of this course is designed to supplement learning through the application of learned theory. The students will handle simple apparatus to do simple measurements, demonstrate simple electrical circuits, and apply their knowledge of physics to real life examples.

Course objectives

On completion of the course the student will be able to:

1. Correlate physics and its applications related to everyday experiences of their life.
2. Identify the social, economic, environmental and other implications of physics.
3. Describe physics as a coherent and developing framework of knowledge based on fundamental theories ofthe structures and processes of the physical world.
4. Demonstrate the skills of experimenting, observing, interpreting data and evaluating evidence to formulate generalizations and models.
5. Apply knowledge of physical principles to familiar and unfamiliar situations.
6. Apply facts, vocabulary and conventions to unit measurements and common measuring instruments.
7. Explain the definitions, laws, concepts, theories and models presented in this course.
8. Describe the applications and implications of physical facts and principles.

Course contents

Course: Physics	**Hrs. theory 75**	**Hrs. lab 30**
Unit 1: Mechanics	Hrs. theory 40	Hrs. lab 6
Sub-unit 1.1: Units and Measurement	Hrs. Theory5	Hrs. lab
Objectives:	Content:	
Define fundamental and derived units. Explain, MKS, CGS and SI system of units. Convert one system of units into another system of units. Express derived units in terms of fundamental units.	Physical concept of mass, length and time. Various systems of units and their conversion. Express derived units in terms of fundamental units. Precise and accurate measurement Dimensional formula for various physical	

Define precise and accurate measurement Use of dimensions to derive simple physical quantities and equations (time period of simple pendulum) Convert one system of units into another using dimensional formula	quantities. Conversion of system of units using dimensions Solve simple numerical problems
Evaluation methods: written and viva exams, performance observation.	Teaching / Learning activities and resources: classroom instruction and demonstration, return demonstration, models, solving related problems.
Unit 1: Mechanics	
Sub-unit 1.2: Scalar and Vectors	**Hrs. theory 5 Hrs. lab**
Objectives:	Content:
Differentiate between scalars and vectors Identify whether a physical quantity is scalar or vector. Resolve vectors into two rectangular components. State and explain triangle and parallelogram law of vectors Point out the resultant of two or more vectors by graphical method. Write the values of scalar product and vector product, for selected problems.	Scalar and vectors with examples. Vector addition by parallelogram and triangle method. Resolve a vector into two components. Triangle and parallelogram law of vectors The product of two vectors either results in a scalar quantity or a vector quantity. Simple numerical problems
Evaluation methods: written and viva exams, performance observation.	Teaching / Learning activities and resources: classroom instruction and demonstration, return demonstration, models, solving related problems.
Unit 1: Mechanics	
Sub-unit 1.3: Kinematics	**Hrs. theory 5 Hrs. lab**
Objectives:	Content:
Define displacement, velocity, instantaneous velocity, average velocity, uniform velocity and acceleration retardation. Differentiate between distance and displacement, speed and velocity. Write down the relation of kinematics equation of motion (linear and gravitational). Calculate the time of flight, maximum height and horizontal range of a projectile(Both cases) Solve simple problems related to the projectile.	Displacement, velocity, instantaneous velocity, average and uniform velocity and acceleration (Retardation). Distance and displacement, speed and velocity. The concept of projectile motion (Show that path of the projectile is parabolic) Solve simple numerical problems
Evaluation methods: written and viva exams, performance observation.	Teaching / Learning activities and resources: classroom instruction and demonstration, return demonstration, models, solving related problems.

Unit 1**: Mechanics**	
Sub-unit 1.4: **Force**	**Hrs. theory 8 Hrs. lab**
Objectives:	Content:
State Newton's laws of motion. Give the concept of inertia of rest, motion and direction. Define force in terms of rate of change of momentum and give their directions. Derive F = ma and used it to solve simple problems. Recognize the impulse is a force act in very short interval of time. State and prove principle of conservation of linear momentum with examples. Define angular displacement, angular velocity & angular acceleration. Distinguish between angular velocity and linear velocity and derive relation between them. Define circular motion, centripetal force, and centrifugal force. State the magnitude and direction of centripetal and centrifugal force and their applications to centrifuge and satellite (not derivation). Differentiate between elastic and inelastic collision. Define friction, laws of limiting friction, angle of friction,angle of repose e of repose and coefficient of friction.	Linear momentum and significance of Newton's Laws of motion in various concepts. Interpret the meaning of inertia of rest and inertia of motion. Illustrate the applications of inertia and impulse. Angular displacement, velocity and acceleration Derive the relation $v = \omega r$. Recall vector nature of velocity and change the direction of velocity in circular motion. Know the magnitude of centripetal force and centrifugal force, $F = mv^2/r = mr\omega^2$(With derivation) Friction, limiting friction, angle of friction and coefficient of friction. State law of limiting friction. Derive the relation between angle of friction and coefficient of friction. Simple numerical problems
Evaluation methods: written and viva exams, performance observation.	Teaching / Learning activities and resources: classroom instruction and demonstration, return demonstration, models, solving related problems.

Unit 1**: Mechanics**	
Sub-unit 1.5: **Work, Energy and power**	**Hrs. theory 5 Hrs. lab**
Objectives:	Content:
Define work energy and power and give their units in various systems. Define KE and PE also give their magnitude. State and verify the principle of conservation of energy. Give examples to demonstrate the uses of the transfer of energy.	The distinction between the common uses of the term work, energy and power and its meaning in Physics. Conservation of energy i.e. change of KE into PE giving example of falling body. Give the transformation of different forms of energies i.e. PE into KE etc. Simple numerical problems
Evaluation methods: written and viva exams, performance observation.	Teaching / Learning activities and resources: classroom instruction and demonstration, return demonstration, models, solving related problems.
Unit 1**: Mechanics**	
Sub-unit 1.6: **Gravity and Gravitation**	**Hrs. theory 5 Hrs. lab**
Objectives:	Content:
State Newton's law of gravitation. Deduce unit and dimension of G. Define acceleration due to gravity and variation of g due to height and depth Differentiate between mass and weight. Explain weightlessness condition in lift State the condition of equilibrium of a body Differentiate between center of gravity and center of mass Satellite, Orbital velocity & time period	Laws of gravitation $F = GMm/R^2$. Acceleration due to gravity, mass and weight The relation between gravitation constant and acceleration due to gravity. The variation of g due to height and depth. Center of mass and center of gravity. Conditions of equilibrium of a body with examples. Simple numerical problems
Evaluation methods: written and viva exams, performance observation.	Teaching / Learning activities and resources: classroom instruction and demonstration, return demonstration, models, solving related problems.
Unit 1**: Mechanics**	
Sub-unit 1.7: **Properties of Matter**	**Hrs. theory 4 Hrs. lab**
Objectives:	Content:
Define elasticity, stress, strain and elastic limit on the basis of Hook's law Write relation for energy stored in a stretched wire and energy density Define surface tension. Differentiate adhesive and cohesive force. Define viscosity of liquid. Describe how the height of liquid rises in a	Hook's law and the relation between stress, strain and elasticity of solid material Elastic potential energy and energy density in a stretched wire. The property of surface tension of liquid. Adhesive and cohesive forces. The capillary action. Viscosity and fluid movement Simple numerical problems

capillary tube of sufficient and insufficient length.	
Evaluation methods: written and viva exams, performance observation.	Teaching / Learning activities and resources: classroom instruction and demonstration, return demonstration, models, solving related problems.
Unit 1: Mechanics	
Sub-unit 1.8: **Hydrostatics**	**Hrs. theory 3 Hrs. lab**
Objectives:	Content:
Demonstrate that fluid pressure acts in all directions Explain that liquid pressure is proportional to the depth of the liquid and independent of the shape of the vessel. Define density, relative density and specific gravity of solids and liquids. Upthrut, Archimedes's principle. Apply Archimedes's principle to determine the specific gravity of various solids and liquids. State the principle of flotation & condition of equilibrium of floating bodies. Explain how barometers works Describe how atmospheric pressure affects human body functions.	Fluid pressure and determination of the formula $P = \rho gh$. Pascal's law. Density, relative density and specific gravity. Difference between density and specific gravity. Archimedes's principle and its uses. Design equipment to verify Archimedes's principle. The principle of floatation and condition of equilibrium for floating bodies. Atmospheric pressure with examples. Introduction of Mercury barometer The effect of air pressure on human body. Simple numerical problems
Evaluation methods: written and viva exams, performance observation.	Teaching / Learning activities and resources: classroom instruction and demonstration, return demonstration, models, solving related problems.
Unit 2: Heat	**Hrs. theory 25 Hrs. lab**
Sub-unit 2.1: **Thermometry**	**Hrs. theory 3 Hrs. lab**
Objectives:	Content:
Define heat and temperature. Distinguish between heat and temperature. Explain sensitivity of liquid thermometers Explain the operation and use of a thermometer. Determine the lower and upper fixed points of the thermometer. Define different temperature scales (Celsius, Fahrenheit and Kelvin) Convert one temperature scale into another. Use the temperature conversion formula to	Concept of heat temperature. Factors on which sensitivity depends Demonstrate various types of thermometers and explain their uses. Derivation of the formula $C/5 = [F - 32]/9 = [K - 273]$ Relation between different temperature scales. Simple numerical problems

convert and solve numerical problems related to it	
Evaluation methods: written and viva exams, performance observation.	Teaching / Learning activities and resources: classroom instruction and demonstration, return demonstration, models, solving related problems.
Unit 2: Heat	
Sub-unit 2.2: **Expansion**	**Hrs. theory 6 Hrs. lab**
Objectives:	Content:
Describe linear, superficial and cubical expansion of solids and their expansivity. Derive the relation between linear, superficial and cubical expansivity of solids Define real and apparent expansion of liquid. Explain the change in density of a substance with the variation temperature. Discuss the density variation of water with temperature (anomalous properties of water). Discuss the concept of water therapy due to high specific heat capacity of water.	Linear, superficial and cubical expansion of solids. The relations $l_2 = l_1[1 + \alpha (\theta_2 - \theta_1)]$, $A_2 = A_1[1 + \beta(\theta_2 - \theta_1)]$, $V_2 = V_1[1 + \gamma(\theta_2 - \theta_1)]$ Derivation of $\gamma = 3\alpha$ and $\beta = 2\alpha$. Apparent and real expansion of a liquid and its relation Change in density of an object due to change in temperature. Anomalous expansion of water and its importance to marine life. Why water is used for cooling and heating purposes.
Evaluation methods: written and viva exams, performance observation.	Teaching / Learning activities and resources: classroom instruction and demonstration, return demonstration, models, solving related problems.
Unit 2: Heat	
Sub-unit 2.3: **Calorimetry**	**Hrs. theory 6 Hrs. lab**
Objectives:	Content:
Define heat capacity, specific heat capacity. Distinguish between joule and calorie as heat unit. Understand the quantity of heat content of a body $Q = ms\theta$. Explain the energy required to cause a phase change at constant temperature. Define freezing, melting and boiling point of a substance Explain latent heat of fusion and latent heat of vaporisation. Discuss the effect of pressure on melting and boiling point of the substance.	Heat capacity, specific heat capacity. Give the relation between joule and calorie. Melting point, boiling point and freezing point of a substance. The effect of pressure on melting and boiling point of substance Determination of latent heat of fusion of ice and latent heat of steam by the method of mixture. Simple numerical problems
Evaluation methods: written and viva exams, performance observation.	Teaching / Learning activities and resources: classroom instruction and demonstration,

	return demonstration, models, solving related problems.
Unit 2: Heat	
Sub-unit 2.4: **Hygrometry**	**Hrs. theory 4 Hrs. lab**
Objectives:	Content:
Define saturated and unsaturated vapours. Differentiate between SVP and USVP. Draw P-V and P-T diagrams and explain the behaviours of vapours. Discuss the effect of pressure and altitude on the boiling point of a liquid. Explain the term due point, absolute humidity and relative humidity. Demonstrate the wet and dry bulb hygrometer and describe its use to determine the relative humidity	Learner will become knowledgeable about: Saturated and unsaturated vapours. Saturated VP and unsaturated VP. P-V and P-T diagrams and explain the behaviours of vapours. The effect of pressure and altitude on the boiling point of a liquid. $R_H = \frac{\text{Partial vapour pressure of water}}{\text{vapour pressure of water}} \times 100\%$ Wet and dry bulb hygrometer and relative humidity.
Evaluation methods: written and viva exams, performance observation.	Teaching / Learning activities and resources: classroom instruction and demonstration, return demonstration, models, solving related problems.
Unit 2: Heat	
Sub-unit 2.5: **Transfer of heat**	**Hrs. theory 6 Hrs. lab**
Objectives:	Content:
Differentiate between conduction, convection and radiation. Define thermal conductivity with its unit and dimension. Distinguish between good and bad conductors of heat. Define black body and black body radiation. Explain transmission of heat by conduction convection and radiation with appropriate application to medical field and daily use. Define black body. State and explain Stefan Boltzmann`s law and give an example of its application. Describe medical uses of thermal radiation.	The transfer of heat by conduction, convection and radiation. Thermal conductivity giving their dimension and units. Laws of black body radiation. Medical uses of heat radiation(thermal therapy) Solve simple numerical problems
Evaluation methods: written and viva exams, performance observation.	Teaching / Learning activities and resources: classroom instruction and demonstration, return demonstration, models, solving related problems.

Unit 3: **Light**	**Hrs. theory 20 Hrs. lab**
Sub-unit 3.1: **Reflection of light**	**Hrs. theory 6 Hrs. lab**
Objectives:	Content:
Explain the laws of reflection of light. Find the deviation of light by plane mirror as rotating mirror. Distinguish between real and virtual image. Show that in plane mirror object distance = image distance. Define the terms pole, center of curvature, radius of curvature, principal focus, principal axis, focal length. Show that r = 2f for spherical mirrors. Draw ray diagrams to solve problems involving spherical mirrors. Derive the formula $\frac{1}{u} + \frac{1}{v} = \frac{1}{f}$	The phenomenon of reflection and hence state the laws of reflection of light. Principles of reflection of light – The rotation of mirror through angle θ the reflected ray is rotated through 2θ. Object distance is just equal to image distance i.e. u = v but the image is virtual. Real and virtual image. Image formation of spherical mirror. How to correct sign for the focal length, object distance and image distance. The relation, r = 2f, $\frac{1}{u} + \frac{1}{v} = \frac{1}{f}$ and I/O = v/u = m for mirrors. Nature, size and position of the image formed by spherical mirrors at various positions of the object distance on the principal axis. Simple numerical problems
Evaluation methods: written and viva exams, performance observation.	Teaching / Learning activities and resources: classroom instruction and demonstration, return demonstration, models, solving related problems.
Unit 3: Light	
Sub-unit 3.2: **Refraction**	**Hrs. theory 8 Hrs. lab**
Objectives:	Content:
State and explain the laws of refraction of light. Verify the laws of refraction of light and define refractive index in different media. Derive the expression for apparent depth and lateral shift in a glass slab. Define critical angle and total internal reflection. Explain the phenomenon of total internal reflection. Explain the passage of light rays through a prism. Derive the formula i + e = A + δ and ($A = r_1 + r_2$) Define minimum deviation and derive the formula $\mu = \sin[(A + \delta_m)/2]/\sin(A/2)$	Phenomenon of refraction. Refractive index in terms of the speed of light in vacuum to the speed of light in medium. The relations ${}_a\mu^g \times {}_g\mu^w \times {}_w\mu^a = 1$. Refractive index in terms of real depth and apparent depth. The relation $d = t(1 - 1/\mu)$ andlateralshift $p = t[\sin(i - r)]/\cos(r)$. Derivation of the formula $\mu = 1/\sin(C)$ Critical angle and conditions for total internal reflection. Examples of total internal phenomenon, mirage, light pipe. Ray box to demonstrate the deviation of light ray in prism. The formula A + δ = i + e and

Define the terms convex lens, image in lens, optical center, and thin lens. Draw a ray diagram to locate positions of image in thin lenses (concave and convex). Derive lens formula and lens maker's formula.	$\mu = \sin[(A + \delta_m)/2]/\sin(A/2)$ Uses of different types of lenses. Converging aspect of convex lens and diverging aspect of concave lens. Ray box to demonstrate image formation by convex as well as concave lens. Lens formula and lens maker's formula. Simple numerical problems
Evaluation methods: written and viva exams, performance observation.	Teaching / Learning activities and resources: classroom instruction and demonstration, return demonstration, models, solving related problems.
Unit 3: Light	
Sub-unit 3.3: **Optical Instrument**	**Hrs. theory 6 Hrs. lab**
Objectives:	Content:
Draw a labeled diagram of human eye. Explain the eye as an instrument, which forms as sharp image on the retina. Explain the terms far point, near point, and least distance of distinct vision. Define the terms visual angle and angular magnification. Explain the technique of removing the defect of vision. Trace the path of rays through simple and compound microscopes. Explain how white light is a combination of seven different colours, easily decomposed into its components. Understand that refractive index varies with colours. Demonstrate the dispersion of light by prism.	Structure of human eye with diagram. The "model eye". Ray diagram to explain the correction of defect of vision. Use of simple and compound microscopes. Calculation of the magnifying power of simple and compound microscopes. Dispersion of light by prism. Dispersion due to variation of refractive index with colours Simple numerical problems
Evaluation methods: written and viva exams, performance observation.	Teaching / Learning activities and resources: classroom instruction and demonstration, return demonstration, models, solving related problems.

Practical

Course: Physics	
Practicals	**Hrs. theory** **Hrs. lab 30**
Objectives:	Content:
1. Determine the volume of a hollow cylinder and a solid cylinder using vernier calipers. 2. Determine the volume of a steel ball and cross section of a glass rod using a micrometer screw gauge. 3. Determine thickness of glass plate using spherometer. 4. Determine the acceleration due to gravity by using simple pendulum. 5. Verify Archimedes' principle and find the specific gravity and density of solids heavier than and insoluble in water 6. Determine the specific gravity of solids dissolved in water. 7. Determine the specific gravity and density of substances lighter than and insoluble in water 8. Verify the laws of reflection of light and find the relationship between object distance and image distance.	Application of theory form preceding units.
9. Determine the refractive index of liquid/glass slab using travelling microscope. 10. Verify laws of refraction and find the refractive index. 11. Determine the upper and lower fixed points of a given thermometer and find the correct temperature of tap water. 12. Find the focal length of a convex lens by the double pin method. 13. Verify the laws of moments of forces and find the weight of a given body. 14. Determine the latent heat of fusion of ice. 15. Determine the melting point of wax by cooling curve method.	Application of theory form preceding units.
Evaluation methods: written and viva exams, performance observation.	Teaching / Learning activities and resources: classroom instruction and demonstration, return demonstration, models, solving related problems.

Recommended Texts

1. Brij Lal and Subramanyan, Principles of Physics.
2. Nelkon and Parker, Advanced Level Physics (5th ed.)
3. Physics Practical Manual, Basanta Raj Rosyra (second edition)

Reference Texts

1. Pradhan, J.M. & Gupta, S.K., A Textbook of Physics (part I & II)
2. Verma, H.C., Concepts of Physics I & II
3. Sears, Zemansky & Young, University Physics
4. Halliday, D & Resnick, R., Physics Part I & II

Mathematics & Statistics

Year: 1st **Part: I** **Semester: I** **Program : Diploma in Beauty and cosmetology**	**Total: 5 hrs/W (75 hrs)** **Theory: 5 hrs/W (75 hrs)** **Practical: hrs/W (0 hrs)**

Course Description

The course is divided into two parts: (a) Elementary Mathematics, (b) Elementary Statistics Part one of this course prepares the student to use mathematical skills necessary for application of medical computations, application of research and statistical interpretations, and for managing the mathematical questions of everyday life. Part two provides a basic overview of the purpose and process of research, a discussion of scientific process, and principles of research methodology in statistics that enables students to apply statistical methods to the interpretation of data related to their services.

Course Objectives

On completion of this course the student will be able to:

- Apply mathematical Skills to solve the problems and interpret research data.
- Use vital statistic terminology to discuss health issues.
- Explain the function and value of research.
- Describe the process and methodology of research.
- Apply mathematical formulas to interpret research data.

Part A: Elementary Mathematics

Course: Mathematics and Statistics	**Hrs. theory 75**
Unit 1: Elementary Mathematics	**Hrs. theory 42**
Sub-unit 1.1: Set theory and real number system	**Hrs. theory 6**
Objectives:	Content:
• Define and denote sets. • Find subsets of a set and represent the sets in venn diagrams. • Find the union, intersection, complement and difference of given sets. • Define cardinality of a finite set • Solve verbal problems using set operations. • Prove algebra of sets • Define real numbers, absolute value, open and closed intervals and inequalities. • Use the concept of set in selected problems.	• The concept of sets, specification of sets, representation and types of sets, venn diagrams. • Proof of the Algebra of sets, De-Morgan's law • Problems related to cardinality of sets. • Set operation, set of numbers, Cartesian products and relation, domain and range of relation. • Real number system and the types of numbers, real numbers line, absolute value, open and closed intervals, inequalities.

Sub-unit 1.2: Function and graph	Hrs. theory 6
Objectives:	Content:
• Define a function • Classify functions. • Identify the different functions. • Define domain and range of relation	• Functions and their inverse and related problems. • Composite function and related problems. • Algebraic only. • Domain and range (excluding inverse and composite function) • Exponential and Logarithmic functions
Sub-unit 1.3: Permutation , combination and binomial theorem.	Hrs. theory 9
Objectives:	Content:
• Concept of Basic principles of counting. • Define the permutation {P(n,r)}. • Use of different cases of permutation and Problem relating to permutation (simple cases only). • Define the combination {C(n,r)} and • problem relating to combination (simple cases only) • Define binomial expression and Binomial theorem.	• Introduction of basic counting principle • Definition of permutation • Formula for finding permutation of n – objects taken r at a time. • Application of formula in related problems. • Permutation of repeated use of same objects in an arrangement. • Meaning of combination. • Binomial theorem(without proof) • Finding general term , middle term/s, binomial coefficients and their properties.
Sub-unit 1.4: Matrices and determinants	Hrs. theory 9
Objectives:	Content:
• Define the term matrix. • Write the rows, columns and order of the matrices. • Classify matrices according to their properties. • Define the addition and multiplication of matrices (of order m x n, with its different types in 3x3 order). • Define a determinant and list the properties of a determinant. • Define the inverse of a matrix.	• Definition of matrix and its notation and order • Types of matrices and simple algebra of matrices. • Transpose, Adjoint and inverse of a matrix and related problems. • Definition of a determinant. • Minors and cofactors • Properties of determinants. • Application of matrix and determinant to solve linear system of equation (inverse of matrix and Cramer's Rule)
Sub-unit 1.5: Algebra& Straight Line (Revision only)	Hrs. theory 2
Objectives:	Content:
• Recall the formula of distance between two points and its slope • Find the angle between two lines and derive the	• Formula of distance between two points and its slope • Angle between two lines and condition of

condition of perpendicularity and parallelism. • Find the distance two parallel line. • Find the area of triangle. • Define quadratic equations and its roots. • Define the nature of roots.	perpendicularity and parallelism. • Distance two parallel line. • Area of triangle. • Quadratic equations , its roots and nature of roots.
Sub-unit 1.6: Integration	**Hrs. theory 10**
Objectives:	Content:
• Define integral as anti-derivative, • Apply techniques of integration as anti-derivative, substitution method, integration by parts and definite integral. • Use definite integral to calculate area enclosed by algebric curve, X-axis and ordinate at x = a to x = b	• Definition of integral as anti-derivative, • Application of techniques of integration as anti-derivative, substitution method, integration by parts and definite integral (algebric only). • Using definite integral to calculate area enclosed by algebric curve, X-axis and ordinate at x = a to x = b
Sub-unit 1.7: Probability	Hrs. theory 6
Objectives:	Content:
• Define probability (classical and empirical) • Application and use addition and multiplication the law of probability • Explain and use binomial probability distribution formula $P(r) = c(n, r) p^r q^{n-r.}$	• Definition of probability (classical and empirical) • Application and use of addition and multiplication law of probability • Explanation and use of binomial probability distribution formula $P(r) = c(n, r) p^r q^{n-r.}$

Part B: Elementary Statistics

Unit 2: Elementary Statistics	**Hrs. theory 33**
Sub-unit 2.1: Introduction to Statistics (Revision only)	**Hrs. theory 2**
Objectives:	Content:
• Define statistics as given by different writers (Prof. Horace Secrist, Prof. Croxton & Crowden and Prof. Ya-Lu-Chan). • State the utility, functions and limitations of statistics.	• Definitions by Prof. Horace Secrist, Prof. Croxton & Crowden and Prof. Ya-Lu-Chan). • Utility, functions and limitation of statistics.
Sub-unit 2.2: Collection, Classification and Tabulation diagrams and graphs (Revision only)	**Hrs. theory 2**
Objectives:	Content:
• Collect data (primary and secondary) • Classify and tabulate data • Prepare frequency table (ungrouped and grouped form) • Represent data on simple, multiple, sub-divided, percentage bar diagram and Pie-diagrams. • Represent data on histogram, frequency polygon,	• Data Collection (primary and secondary) • Classification and tabulation of data • Preparation of a frequency table (ungrouped and grouped form) • Representation of data on simple, multiple, sub-divided, percentage bar diagram and Pie-diagrams.

frequency curve and Ogive curve	• Representation of data on histogram, frequency polygon, frequency curve and Ogive curve
Sub-unit 2.3: Central tendency	**Hrs. theory 4**
Objectives:	Content:
• Define central tendency • Calculate mean, median, mode, and partition values (Quartiles, Deciles and Percentiles) for ungrouped and grouped data mathematically	• Definition of central tendency • Calculation of mean, median, mode, and partition values (Quartiles, Deciles and Percentiles) for ungrouped and grouped data mathematically
Sub-unit 2.4: Measure of dispersion	**Hrs. theory 6**
Objectives:	Content:
• Calculate range, quartile deviation and standard deviation for ungrouped and grouped data mathematically • Concept of absolute and relative measures of dispersion • Compute coefficient of range, quartile deviation, and variation for ungrouped and grouped data mathematically	• Calculation of range, quartile deviation mean deviation and standard deviation for ungrouped and grouped data mathematically • Absolute and relative measures of dispersion • Computation of coefficient of range, quartile deviation, mean deviation, and variation for ungrouped and grouped data mathematically
Sub-unit 2.5: Correlation Coefficient	**Hrs. theory 7**
Objectives:	Content:
• Define the concept of correlation. • Define correlation method by drawing Scatter diagram • Explain Karl Pearson's coefficient of correlation between two variables. • Define Sparman's rank correlation • Define Probable error , standard error and test of significant of correlation	• Concept of correlation. • Method of studying correlation by drawing Scatter diagram • Calculations of Karl Pearson's coefficient of correlation between two variables. • Sparman's rank correlation. • Probable error , standard error and test of significant of correlation.
Sub-unit 2.6: Vital statistics	**Hrs. theory 8**
Objectives:	Content:
a) Vital Statistics • Define the term vital statistics. • Describe the utility of vital statistics. • Identify the different sources of vital statistics. **b) Measure of Fertility** • Define the meaning of Fertility • Describe different measures of fertility • Compute different indicators related to fertility **c) Measures of mortality** • State the meaning of mortality	**a) Vital Statistics** • Definition of the term vital statistics. • Utility of vital statistics. • Different sources of vital statistics. **b) Measure of Fertility** • Meaning of Fertility • Different measures of fertility • Different indicators related to fertility (crude birth rate, specific fertility rate, General Fertility rate, total fertility rate)

• Describe different measures of mortality • Compute different indicators related to mortality **d) Measures of morbidity (sickness)** • State the meaning of morbidity • Describe different measures of morbidity • Compute the incidence rate and prevalence rate	**c) Measures of mortality** • Meaning of mortality • Different measures of mortality • Different indicators related to mortality (crude death rate, specific death rate, infant mortality rate, maternal mortality rate and still birth rate) **d) Measures of morbidity (sickness)** • Meaning of morbidity • Different measures of morbidity • The incidence rate and prevalence rate
Sub-unit 2.7: Research methodology	**Hrs. theory 4**
Objectives:	Content:
• Define the concept of research. • Describe the process and methodology of research by stepwise scientific method or formula application. • Discuss the importance of interpreting research results	• Definition of research • Research methodology. • Steps of research. • Scientific method. • Statistical tools for measuring reliability of results. • Interpreting and understanding research data. • Applications of research in medical science.

Recommended Texts

Bajracharya, D.R. & et al., Basic Mathematics, for grade XI and XII National Book Centre, Kathmandu.

Mahajan B.K.Method of Biostaticstics, (16th edition) park's text book of PSM 2003

Pradhan, J. B. & Pantha, B. R. Integrated Mathematics for Health Science. Sukunda Pustak Bhavan, Bhotahity, Kathmandu.

Fundamentals of Beauty

Year: 1st	**Total: 3 hrs/W (45 hrs)**
Part: I	**Theory: 2 hrs/W (30 hrs)**
Semester: I	**Practical: 1 hrs/W (15 hrs)**
Program : Diploma in Beauty and cosmetology	

Course Description:

This course is designed to provide students the fundamental knowledge and skills of beauty. This explains the history and progress of beautification and the related sector from the different parts of the world. It provides the basic information of beauty regarding the daily care of skin, body, hair and Nails. The basic rule for the beautification of Skin, hair, body and nail is explained in details throughout the chapters emphasizing the process that enhance someone's personal beauty. The practical component of this course is designed to supplement learning through the application of learned theory. The students will handle simple apparatus to do simple beauty treatments, and apply their knowledge to real life.

Objectives:

After completion of this course the students will be enabled to:

1. Describe the history and development of beautification
2. Explain the basic process of skin, hair and nail beautification.
3. Perform the basic threading and artistry of eyebrows.
4. Define the benefits of massage, manicure and pedicure.

Course Contents

Theory (30 hrs)

Unit 1: Fundamental of Beauty **4 hrs**

1.1 Introduction
1.2 History
1.3 Improvisation

Unit 2: Skin **5 hrs**

2.1 Introduction
2.2 Types
2.3 Functions
2.4 Structure
2.5 Skin care

- Traditional
- Aroma
- Herbal
- Medicated

Unit 3: Hair **5 hrs**

3.1 Introduction
3.2History of Hair Culture
3.3 Types
3.4 Structure
3.5 Forms
3.6 Hair Care
- Traditional
- Herbal
- Aroma
- Medicated

Unit 4: Hand care and foot care **4 hrs**

4.1 Introduction
4.2 History of Manicure and Pedicure
4.3 Procedures of care
4.4 Benefits of care

Unit 5: Massage **4 hrs**

5.1 Introduction
5.2 History of massage
5.3 Types
5.4 Procedures
5.5 Advantages

Unit 6: Artistry of Beauty **4 hrs**

6.1 History of Artistry of Beauty
6.2 Threading
- Eyebrow
- Upper-lip
- Forehead
- Cheeks
- Hairline
- Chins

6.3 Sketching Eyebrows according to
- Face shape
- Aryan Eye
- Mongolian Eye

Unit 7: Make up **4 hrs**

7.1 Introduction
7.2 History of Make-up Art
7.3 Types of make up: eye, lip, face and neck
7.4 Art of makeup
7.5 Make up application and removal

PRACTICAL (15 hrs)

Unit 1: Perform threading **6 hrs**

Unit 2: Skin **3 hrs**

2.1 Identify of skin types

- Tissue Issue
- Litmus Paper Check
- Patch Test
- Soap Test.

2.2 Application of skin care products

Unit 3: Hair **2 hrs**

Identify of Hair types

- Strands
- Scalp

Unit 4: Hand care and foot care **2 hrs**

- Perform hand and foot care (Manicure & Pedicure)

Unit 5: Make up **2 hrs**

5.1 Perform make up

5.2 Perform make up removal

Reference Books:

1. John W Dalton- The Professional Cosmetologists (third edition)
2. Kathryn Klingee- First Book of Beauty (Publisher: Simon and Sehuster, America)
3. Linda Sonntag- The Hair Style, Hair Care and Beauty Book (Publisher: Tiger books international, London)
4. Ann Gallant – Principles and Techniques for the Beauty Specialist (Publisher: Stanley Thornes Published Ltd. England)
5. Felicity Clark- Vogue Guide to Hair Care (Publisher: Penguin Books, USA)
6. Dr.Rekha Seth- The Beauty Book (Publisher: Penguin Books, New-Delhi)
7. Dr.Renu Gupta- Hair Care (Publisher: Delhi Diamond Pocket Books)
8. Dr.Neena Khanna- Department of skin, body and beauty care (Publisher: Delhi Pustak Mahal)
9. Rashmi Sharma- Herbal Beauty Care Publisher: Delhi Pustak Mahal)

Fundamentals of Cosmetology

Year: 1st	**Total: 3 hrs/W (45 hrs)**
Part: I	**Theory: 3 hrs/W (45 hrs)**
Semester: I	**Practical: 0 hrs/W (0 hrs)**
Program : Diploma in Beauty and cosmetology	

Course Description:
This course is designed to provide students the fundamental knowledge of cosmetics and cosmetology. It describes the history and development of Cosmetics in different part of the world and further describes the future and scientific research in the field of genetically developed cosmetics. It provides informations on the future career of the student studying cosmetology as their major subject.

After completion of this course the students will be enabled to:

1. Explain Beauty, Cosmetics and Cosmetology.
2. Explain the history and development of cosmetics.
3. Analyze the branches and career of the cosmetology.
4. Explain the future development in Cosmetics.

Course Contents

Theory: 45 hrs

Unit 1: Introduction
- 1.1 Cosmetics
- 1.2 Cosmetology

Unit 2: History
- 2.1 Beautification
- 2.2 Cosmetics
- 2.3 Uses of Cosmetics
- 2.4 Cosmetic improvisation

Unit 3: Branches
- 3.1 Cosmetic Application
- 3.2 Cosmetic Production

Unit 4: Career
- 4.1 Cosmetic Chemist
- 4.2 Retail Specialist

Unit 5: Future aspects
- 5.1 Advance Cosmetic ingredients
- 5.2 Genetically Developed Cosmetics

Reference Books:

1. Milady's Standard, Textbook of Cosmetology- Revised, Milady Publishing Company-2010
2. Beauty Therapy, The Foundations , Lorraine Nordmann, THOMSON2004

Computer Application

Year: 1st	**Total: 4 hrs/W (60 hrs)**
Part: I	**Theory: 2 hrs/W (30 hrs)**
Semester: I	**Practical: 2 hrs/W (30 hrs)**
Program : Diploma in Beauty and cosmetology	

Course Description
This course is intended to provide students with the knowledge and skills on basic computer system and Information Technology.

Course Objectives
After the successful completion of this course, the students will be able to:

- **a.** Identify computer system, computer hardware and software
- **b.** Install and use required Operating System, Application Software and utilities
- **c.** Perform binary, octal and hexa-decimal calculations and conversions
- **d.** Identify System Development Life Cycle (SDLC)
- **e.** Configure IP addresses on computers on network
- **f.** Use internet and e-commerce

Course Contents

Theory

Unit 1: Introduction to Computer **4 hrs**

1.1. History of computer
1.2. Definition
1.3. Advantages and disadvantages of computer
  1.3.1. Characteristics
  1.3.2. Accuracy
  1.3.3. Speed
  1.3.4. Vast Storage
  1.3.5. Reliability
  1.3.6. Diligence
  1.3.7. Automatic,
  1.3.8. Non-intelligent
  1.3.9. Versatile
1.4. Categories of computers on the basis of size:
  1.4.1. The Large Super Computers,
  1.4.2. Mainframes,
  1.4.3. Minicomputers,
  1.4.4. Workstations,
  1.4.5. Microcomputers,
  1.4.6. Laptops and Palmtops
1.5. Applications of computer

Unit 2: Computer System **8 hrs**

2.1. Various components of computers:
  2.1.1. Input Devices: Keyboard, Mouse, Microphone
  2.1.2. Output Devices: Monitors, Printers: Impact (Dot Matrix); Non-Impact (Ink-jet and laser printer), Speaker
2.2. The Central Processing Unit (CPU)
  2.2.1. CU, ALU and Registers
2.3. Storage
  2.3.1. Primary Storage: Cache Memory, RAM and ROM and their types
  2.3.2. Auxiliary Storage: Magnetic Tape; Magnetic Disks: Hard Disk, Pen Drive, Memory Card; Optical Disk: CD, DVD, Magneto-Optical (MO) devices, The Blue-Ray Technology
2.4. Computer Software
  2.4.1. Introduction
  2.4.2. System Software: Operating System, Utility Software
  2.4.3. ApplicationSoftware: Word Processor, Spread Sheet, Presentation Tool

Unit 3: NumberSystem, Boolean Operations and Logic Gates **3 hrs**

3.1. Decimal, Binary Octal and Hexa-decimal Number System
3.2. Binary-to-Decimal and Decimal-to-Binary Conversion
3.3. Binary Addition and Subtraction
3.4. Logic Gates with description of AND, OR and NOT gates
3.5. Combinational Circuit.

Unit 4: Problem Solving Using Computers **3 hrs**

4.1. Algorithm and Flowchart as one of the steps in problem solving
4.2. Problem – Solving using computers and Programming Techniques
4.3. Machine Language, Assembly Language, High-Level and Low-Level Language
4.4. Assemblers, Compilers and Interpreters

Unit 5: Computer System Analysis and Development **2 hrs**

1. Case Study the steps in System Development life cycle
  5.1.1 Investigation
  5.1.2 Analysis
  5.1.3 Design
  5.1.4 Implementation
  5.1.5 Documentation

Unit 6: Multimedia **2 hrs**

6.1. Multimedia and its various uses
6.2. Various image file formats: PNG, JPEG, GIF, TIF etc.
6.3. Animation, audio and video

Unit 7: Computer Network **2 hrs**

7.1. Overview of the computer network
7.2. Various network topologies with their advantages and disadvantages
7.3. TCP/IP protocol stack
7.4. Various types of network: LAN, MAN and WAN
7.5. Categories of networks in terms of Internet and Intranet

Unit 8: Introduction to the Internet **2 hrs**

8.1. Client-Server Architecture of computer networks
8.2. World Wide Web (www)
8.3. Static Vs. Dynamic Contents on the Web
8.4. Electronic Mail (e-mail) and its importance

Unit 9: Introduction to Electronic Commerce **2 hrs**

9.1. Basic concept of e-Commerce with its various aspects
9.2. Various types of e-Commerce

Unit 10: Societal Issues of Computer **2 hrs**

10.1. Computer Crime in context of various ethical issues in Computing
10.2. Cyber Law

Practical **Total Time: 30 hours**

Unit 1: Hardware **4 hrs**

1.1. The lab session should introduce various components of computer and give knowledge of basic computer parts
1.2. Perform computer assembling with device related issues

Unit 2: Software **5 hrs**

2.1. The Operating System Installation
2.2. Introduction to Device Drivers
2.3. Files (File Names/ Formats/ Extensions) and Folders

Unit 3: MS-DOS **6 hrs**

3.1. Lab work consisting of several DOS commands to accomplish various tasks Create, Move, Rename, Copy, Delete Files/Folders

Unit 4: MS-Office **10 hrs**

4.1. Lab work consisting of standard features to perform related tasks on various office element software: MS-Word and MS-Excel
4.2. Lab work consisting of standard features to perform related tasks on multimedia presentation (Format slide and presentation, graphics, charts and media clips, animation effect, slide shows, view and print presentation).

Unit 5: Computer Network and Internet **5 hrs**

5.1. Visibility of computers inside a network, sharing of resources, browsing through the Internet, the fundamentals of e-commerce etc.

References:

1. Norton, Peter, ***Introduction to Computers***, Tata McGraw-Hill
2. Sinha, P.K., ***Computer Fundamentals***, BPB Publication
3. Kahate, Atul, ***Foundation of IT***, Tata McGraw-Hill

Year: First

Semester: II

Subjects:

1. English II
2. Chemistry II
3. Physics II
4. Anatomy and Physiology of Skin, Hair and Nail
5. Removal of Superflus Hair
6. Nail Health and Beautification
7. Diet and Nutrition
8. Applied Cosmetology

English II

Year: 1st	**Total: 5 hrs/W (75 hrs)**
Part: II	**Theory: 5 hrs/W (75 hrs)**
Semester: II	**Practical: 0 hrs/W (0 hrs)**
Program : Diploma in Beauty and cosmetology	

Course Description

This is an integrated general English course, which treats English as a medium for communication and as a means to knowledge and skill related to health. It provides a remedial refresher course including basic English grammar and structures and use of a dictionary, tools for receiving and imparting information effectively, and exposure to poems, essays and stories which are interesting and informative topics of global interest. This course provides a bridge between secondary and university English.

Course Objectives

On completion of the course student will be enabled to:

- Use English for academic and communicative purposes.
- Demonstrate functional, notional and grammatical skill in English language usage.
- Use English structures in informal communication.
- Analyze the prescribed texts related to different literary genres.
- Answer the questions based on the reading texts.
- Produce different types of free compositions.

Course Contents:

Part 1: Grammar

Unit 1: The Passive **Time: 6 hrs**

Objectives

- Transform the active voice into passive.
- Use 'it' and 'there' as impersonal subjects

Contents

- The passive voice
- "It" as impersonal subject
- 'There' as impersonal subject

Unit 2: Reporting **Time: 8 hrs**

Objectives

- Make reporting structures using 'that clause'.
- Perform reporting using reporting verbs

Contents

- Reporting structures- 'that clause'
- Other report structure
  (order, request, suggest, beg, deny, admit, accuse,warn, refuse, promise,advise etc).

Unit 3: Sentence Structures **Time: 10 hrs**

Objectives

- Use time clauses in various

Contents

Time clauses

situations. • Make conditional clauses with 'if' and 'unless'. • Use defining and non-defining relative clauses.	• Conditional clauses using 'If' • Conditional clauses using modals and 'unless' • Defining Relative clauses • Non- Defining Relative clauses • Changing the focus of a sentence • Cohesion: Making connection in speech and writing

Unit 4: Free Writing
Objectives
• Write free paragraphs
• Write free and guided essays
• Write Letters
• Write technical and academic report
• Compose Dialogues
	Time: 12 hrs
	Contents
	• Paragraph Writing
	• Essay Writing
	• Letter Writing
	• Report Writing
	  ○ Technical
	  ○ Academic report
	• Making Dialogues

Unit 5: Comprehension Passage and Terminologies **Objectives** • Answer the short questions based on the passage. • Define Common Terminologies	**Time: 6 hrs** **Contents** • Passages related to Beauty and cosmetic Issues • Common beauty and cosmetic Terminologies

Part 2: Extensive reading (Literature)

The Magic of Words (collection of poetry, essays, prose)	**Time: 33 hrs.**
Objectives	Contents
Unit 1: Poems	**Theory Time: 8 hrs.** Keeping Things Whole, Mark Strand On the Vanity of Earthly Greatness, Arthur Guiterman
Unit 2: Supernatural Stories	**Theory Time: 8 hrs.** The House Call The Loving Mother
Unit 3: Stories	**Theory Time: 4 hrs.** The Gardener
Unit 4: Essays	**Theory Time: 8 hrs.** Ooops! Hows' That Again, Roger Rosen Blatt The Six Million Dollar Man, Harold J. Morowitz
Unit 5: Drama/Play	**Theory Time: 5 hrs.** Malini, Rabindra Nath Tagore,

Recommended texts

1. *Link English, Sajhaprakashan,*
2. *The Magic of Words (collection of poetry, essays, prose)*
3. *Intermediate English grammar, Raymond Murphy, Cambridge university press.*
4. *W. Dave (2011), Students Grammar, the University of Brigham, London; Harper Collins Publishers.*

Chemistry II

Year: 1st	**Total: 7 hrs/W (105 hrs)**
Part: II	**Theory: 5 hrs/W (75 hrs)**
Semester: II	**Practical: 2 hrs/W (30 hrs)**
Program : Diploma in Beauty and cosmetology	

Section A: General and Physical Chemistry

Unit 1: Volumetric Analysis **7 hours**

Equivalent weight (element, acid, base, salt), units of strength of solution (gram per litre, molarity, normality, percentage), principle of volumetric analysis, titration (acidimetry and alkalimetry techniques), selection of indicator in acid base titration, pH, pOH, pH scale, related numericals

Unit 2: Electrochemistry **6 hours**

Strong and weak electrolyte, Faraday's laws of electrolysis and related numericals, electrolysis of water, composition and functions of electrolytes in body, electrolyte imbalance and its symptoms, buffer solution and importance of buffer in human body

Unit 3: Acid, Base and Salt **4 hours**

Characteristics of acid , base and salt, Arrhenius and Bronsted Lowry concept of acid base, strong and weak acid and base, types of salt, clinical uses of salts (in acid and base poisoning or bites)

Unit 4: Energetics of Chemical Reaction **5 hours**

Exothermic and endothermic reactions, enthalpy and enthalpy change, enthalpy of reaction (combustion, neutralization, formation), bond energy, applications of enthalpy of reaction, First law of thermodynamics, Hess's law of constant heat summation

Unit 5: Catalysis **3 hours**

Introduction, types, intermediate compound formation theory of catalysis, Enzyme catalysis and its characteristics, promoters, autocatalysis, catalyst poisoning, common enzymes involved in biochemical reactions.

Section B: Organic Chemistry

Unit 6: Structural Isomerism and Molecular Geometry **6 hours**

Introduction, types (chain isomers, functional isomers, position isomers, metamers and tautomers with examples) , molecular geometry on the basis of VSEPR theory (methane, water and ammonia), hybridization and its types with reference to methane, ethane and ethyne

Unit 7: Alcohols and Phenols **6 hours**

Alcohol: Introduction, types (primary, secondary and tertiary) , classification on the basis of number of OH groups, aliphatic and aromatic alcohols, preparation by fermentation of molasses , physical and chemical properties of alcohol, clinical and industrial uses of alcohol, alcohol poisoning, iodoform test of ethyl alcohol , glycerine: preparation and uses

Phenol: Introduction, Physical and chemical properties, uses, toxicity and its clinical management

Unit 8: Ether **3 hours**

Introduction, aliphatic and aromatic ether, physical and chemical properties of ether, ether poisoning, uses

Unit 9: Carbonyl Compounds **6 hours**

Introduction, preparation of formaldehyde, acetaldehyde, acetone and benzaldehyde from oxidation of respective alcohols , nucleophilic addition reaction in carbonyl compounds, aldol condensation, Cannizzaro reaction, Benzoin condensation, Clemmensen reduction, wolf Kishner reduction , preparation of bakelite and its properties

Unit 10: Carboxylic Acids and their Derivatives **9 hours**

Introduction, Preparation of carboxylic acid (formic acid, acetic acid and benzoic acid) by oxidation of respective aldehydes, general reactions of carboxylic acid, uses of formic acid, acetic acid and benzoic acid.

Acid chloride, anhydride, ester and amide: preparation from carboxylic acid, physical and chemical properties, uses

Unit 11: Nitro compounds and Amines **6 hours**

Nitro compounds: Introduction, preparation of nitrobenzene, physical and chemical properties of nitrobenzene, uses

Chemical properties of aniline, uses of amine

Unit 12: Biomolecules **6 hours**

Carbohydrate: introduction, classification, linear structure of glucose, functions of carbohydrate

Protein: amino acid and peptide bond, zwitter ion, isoelectric point, essential and non essential amino acids, polypeptide as primary chain of protein, functions of protein

Enzyme: Introduction, coenzyme and apoenzyme, holoenzyme, prosthetic group, functions of enzyme

Lipid: Introduction, alkaline hydrolysis of fat and oil, functions of lipid

Vitamin: Introduction, fat soluble and insoluble vitamins, importance and functions of vitamin

Section C: Pharmaceutical and Cosmoceutical Chemistry

Unit 13: Drugs and Dyes **4 hours**

Drugs: Introduction, natural and synthetic drugs, types (antipyretic, analgesic, antiseptic, disinfectant, antibiotic and tranquilizer) with example, drug addiction, withdrawl syndrome, hypersensitivity of drugs ,topical and oral drugs used in skin ailments

Dyes: Introduction, natural and synthetic dyes, direct and mordant dyes, edible and non edible dyes , uses and adverse effects of fluorescein dye, dyes used in topical therapy (zinc oxide, salicylic acid, sodium hyaluronate)

Unit 14: Chemistry of Topical Therapy **4 hours**

Basic principles of topical care, composition of topical cosmetics (active ingredient and vehicle), chemical composition or formulary of cosmetics (paints, lotion, cream and ointment, gel, oil and grease, paste, soap and detergent, preservatives, corticosteroids), components of sunscreen (light absorbers: opaque barriers and depigmentary agents), pharmacological effects and adverse effects of topical steroids, ways of absorption of cosmetics, protocols of usage of cosmetics, ways of proper application of sunscreen

Chemistry Practical **Teaching load: 30 hours (2 hours /week)**

Year: I

Part: II

1. To determine equivalent weight of given metal by hydrogen displacement method.
2. To determine enthalpy of neutralization of sodium hydroxide by hydrochloric acid.
3. To identify if a sample of alcohol is ethanol or methanol by iodoform test.
4. To carry out the test for carbohydrate.
5. To carry out the test for protein in a sample.
6. To carry out the saponification test for a given sample of fat or oil.
7. To detect the basic radical of a given sample of salt by wet ways (one each from group I, II, IIIA, IIIB and IV).
8. To prepare acidic and basic buffer solutions.
9. To demonstrate the proper usage of sunscreen and cosmoceutical powder on skin ailments.
10. To detect the presence of glucose in a sample (urine of a diabetic patient).
11. To determine the strength of given hydrochloric acid solution by titrating it against decinormal sodium carbonate solution.
12. To determine the strength of given sodium hydroxide solution by titrating it against decinormal hydrochloric acid solution.

Recommended Books

Pandit, C.N. Dr.; Chemistry Education; K.P. Publication, 4433738, Dillibazar, Kathmandu.
Mitra,LadliMohan,A textbookof Inorganic Chemistry. Ghosh&Co.Currentedition.
Tuli, G.D.etal.,IntermediateOrganic Chemistry. S. Chand&Co. Currentedition.
Jauhar,S.P.,ModernABC's ofChemistry (vol.I&II).Modern Publishers. Current edition.

Reference Books

Jha,J.S.,&Gugliani,S.K.,A Textbook of Chemistry. SeiryaPublication.Current edition.
Sthapit,M.&Pradhananga,R.R.,Fundamentalsof Chemistry (vol. I&II). Taleju Prakashar.Currentedition.
Pandit, C.N. Dr., Subedi, R.R. and Tiwari, Prakash; A Textbook of Chemistry; K.P. Publication, Dillibazar, Kathmandu.

Physics II

Year: 1st	**Total: 7 hrs/W (105 hrs)**
Part: II	**Theory: 5 hrs/W (75 hrs)**
Semester: II	**Practical: 2 hrs/W (30 hrs)**
Program : Diploma in Beauty and cosmetology	

Course Description

This course in physics is designed to provide students with an understanding of the scientific laws of our physical world, and how physics contributes to life's activities in modern society. The course emphasizes both quantitative and qualitative aspects of physics, involving mathematical models and equations. The application of physics to social and environmental situations is well illustrated.

The practical component of this course is designed to supplement learning through the application of learned theory. The students will handle simple apparatus to do simple measurements, demonstrate simple electrical circuits, and apply their knowledge of physics to real life examples.

Course objectives
On completion of the course the student will be able to:

- Correlate physics and its applications related to everyday experiences of their life.
- Identify the social, economic, environmental and other implications of physics.
- Describe physics as a coherent and developing framework of knowledge based on fundamental theories ofthe structures and processes of the physical world.
- Demonstrate the skills of experimenting, observing, interpreting data and evaluating evidence to formulate generalizations and models.
- Apply knowledge of physical principles to familiar and unfamiliar situations.
- Apply facts, vocabulary and conventions to unit measurements and common measuring instruments.
- Explain the definitions, laws, concepts, theories and models presented in this course.
- Describe the applications and implications of physical facts and principles.

Second Semester			
Course: Physics II	**Hrs. theory 75**		**Hrs. lab**
Unit 4: Waves and Sound	Hrs. theory	12	Hrs. lab
Sub-unit 4.1: Waves	Hrs. theory	6	Hrs. lab
Objectives:	Content:		
Define transverse, longitudinal, progressive and stationary waves with examples. Frequency, Wavelength, Time period andvelocity o f the wave. Describe how a wave carries only energy fronm onepoi nt to anot her and n o material	Equations of progressive and stationary waves Energy flow in a wave Superposition of waves Reflection, refraction, diffraction, and interference of waves Simple numerical problems		

particle is transmittedin the wave motion. Show that a wave undergoes reflection refraction,interference and diffraction phenomena	
Evaluation methods: written and viva exams, performance observation.	Teaching / Learning activities and resources: classroom instruction and demonstration, return demonstration, models, solving related problems.
Unit 4: Waves and Sound	
Sub-unit 4.2: Characteristics of Sound Waves	Hrs. theory 6 Hrs. lab
Objectives:	Content:
Differentiate between noise and music. Explain the characteristic of musical sound. Define the terms sonic (audible), infrasonic, ultrasonic and super sound. Define beats and write down beats formula using superposition of waves. Describe how intensity of sound is proportional to the square of amplitude. Define intensity level, bel and decibel. Explain the threshold of hearing and threshold of pain. Explain ultrasonic waves and its medical uses. Explain the evidence that sound waves in air are longitudinal waves. Explain how air undergoes compression and rarefaction as sound waves travels through the air.	The characteristics of sound i.e. note, pitch, intensity, loudness and timber. Qualitative relations of pitch with frequency, intensity with loudness and overtones with quality of sound. Beat and beat frequency. Intensity level in terms of decibel. Threshold of hearing and threshold of pain. Ultrasonic wave and its medical uses. Simple numerical problems
Evaluation methods: written and viva exams, performance observation.	Teaching / Learning activities and resources: classroom instruction and demonstration, return demonstration, models, solving related problems.

Unit 5: Electrostatics	Hrs. theory 10 Hrs. lab
Sub-unit 5.1: Fundamentals of electrostatics	Hrs. theory 4 Hrs. lab
Objectives:	Content:
Explain the properties of electrical charges. Distinguish between conductor, insulator, and semiconductor. Explain the phenomenon of charging by friction, conduction and induction. Describe the surface charge density on various conductors	Charges and their behaviour. Electrification by friction, conduction and induction on the basis of modern theory. Surface charge density Simple numerical problems

Evaluation methods: written and viva exams, performance observation.	Teaching / Learning activities and resources: classroom instruction and demonstration, return demonstration, models, solving related problems.
Unit 5: Electrostatics	
Sub-unit 5.2: Electrostatic Field	Hrs. theory 6 Hrs. lab
Objectives:	Content:
State and explain Coulomb's law. Explain the properties of lines of force Define electric field and electric flux. Calculate electric field intensity due several point charges. Define electric potential difference, potential energy and electron volt. Concept about the equipotential surface. Concept about zero potential E=V/d, for parallel plates capacitor	Coulomb's law for point charges and derivation of the expression for force. Effects of permittivity on a medium between two point charges. Electric field and normal electric flux. Potential and potential energy(no derivation) Analogy between electric potential and gravitational potential. Electron volt and its use. Simple numerical problems
Evaluation methods: written and viva exams, performance observation.	Teaching / Learning activities and resources: classroom instruction and demonstration, return demonstration, models, solving related problems.
Unit 6: Magnetism	Hrs. theory 9 Hrs. lab
Sub-unit 6.1: Fundamentals of Magnetism	Hrs. theory 5 Hrs. lab
Objectives:	Content:
Explain magnetic field strength, lines of force, magnetic field intensity, and permeability. State Coulomb's law for magnetism. Describe the properties of a magnet. Calculate magnetic field intensity due to a bar magnet at any point on the equatorial and axial line of a bar magnet. Explain Tangent law of magnetism Trace the lines of force and describe their properties. Define neutral point.	Like pole repel and unlike pole attract to each other. Various types of magnets and their positions of poles. Coulomb's law for magnetism. Magnetic field intensity due to bar magnet at (a) end on position (b) broad side on position. Lines of force around a bar magnet and the neutral point. Uniform and nonuniform magnetic field Simple numerical problems
Evaluation methods: written and viva exams, performance observation.	Teaching / Learning activities and resources: classroom instruction and demonstration, return demonstration, models, solving related problems.
Unit 6: Magnetism	
Sub-unit 6.2: Terrestrial Magnetism	Hrs. theory 4 Hrs. lab
Objectives:	Content:
Describe the dip, declination, and horizontal	

components of earth's magnetic field. Define and give the properties of dia, para and ferromagnetic materials.	Dip, declination, horizontal and vertical components of earth's magnetic field. Properties of dia, para and ferromagnetic Materials Domain theory Simple numerical problems
Evaluation methods: written and viva exams, performance observation.	Teaching / Learning activities and resources: classroom instruction and demonstration, return demonstration, models, solving related problems.
Unit 7: Current Electricity	Hrs. Theory 16 Hr s. lab
Sub-unit 7.1: Electric current	Hrs. theory 6 Hrs. lab
Objectives:	Content:
Discuss current as the rate of flow of charge. State and verify Ohm's law. Define resistance and resistivity. List the factors that influence resistance of a conductor. Distinguish between Ohmic and non-Ohmic conductors. Find the equivalent resistance from the series and parallel combination of resistors. Perform the conversion of galvanometer into voltmeter and ammeter.	Current as the rate of flow charge. Potential difference. Ohm's law and its verification. Expression $R = R_1 + R_2 + R_3 +$ …….and $1/R = 1/R_1 + 1/R_2 + 1/R_3 +$ ….. in series and parallel combination. Conversion of a galvanometer into ammeter and voltmeter. Ohmic and non-Ohmic conductors from I-V curve. Various types of electrical circuits. Simple numerical problems
Evaluation methods: written and viva exams, performance observation.	Teaching / Learning activities and resources: classroom instruction and demonstration, return demonstration, models, solving related problems.
Unit 7: Current Electricity	
Sub-unit 7.2: Resistance and heat	Hrs. theory 4 Hrs. lab
Objectives:	Content:
State and explain Joule's laws of heating. Distinguish between potential difference and emf. Relate emf, terminal potential and internal resistance.	Joule's laws of heating and derivation of the equation: $H = i^2Rt/J$ Heat production in resistance wire due to passage of current. Electric power in terms of energy dissipated in a time in the resistance wire. Meaning of emf and internal resistance of a cell. Relation $E = V + Ir$. Purpose of grouping of cells to find maximum current and maximum voltage. Electric power, watt, kilowatt, kilowatt-hour and horsepower. Meaning of Joule's conversion factor.

	Simple numerical problems
Evaluation methods: written and viva exams, performance observation.	Teaching / Learning activities and resources: classroom instruction and demonstration, return demonstration, models, solving related problems.
Unit 7: Current electricity	
Sub-unit 7.3: Chemical effect of current& alternating current	Hrs. theory 4 Hrs. lab
Objectives:	Content:
Explain the term electrolysis, electrolyte, electrodes (cathode and anode) and ions. Explain electrochemical equivalent of the elements. Explain Faraday's laws of electrolysis and experimental verification. Define Faraday's constant. Explain the thermocouple principle. Explain Seebeck and Peltier effect Compare AC and DC.	Faraday's laws of electrolysis and the method of its verification. Faraday's constant and electro chemical equivalent. Thermocouple, Seebeck and Peltier effect. Terms, neutral point and temperature of inversion. Concept about thermoelectric series.
Evaluation methods: written and viva exams, performance observation.	Teaching / Learning activities and resources: classroom instruction and demonstration, return demonstration, models, solving related problems.
Unit 8: Modern Physics	**Hrs. Theory 28 Hrs Hrs. lab**
Sub-unit 8.1: Electron	**Hrs. theory 5 Hrs. lab**
Objectives:	Content:
Explain the particle nature of electricity. Discuss the nature, production and properties of cathode rays. Derive the motion of electrons in electric and magnetic fields.	Particle nature of electricity. Production and properties of cathode rays. Moving electrons in electric and magnetic fields. Specific charge of an electron (introduction) Simple numerical problems
Evaluation methods: written and viva exams, performance observation.	Teaching / Learning activities and resources: classroom instruction and demonstration, return demonstration, models, solving related problems.
Unit 8: Modern Physics	
Sub-unit 8.2: Photoelectricity	**Hrs. theory 4 Hrs. lab**
Objectives:	Content:
Define the terms photoelectric effect, photon, wave function, threshold frequency and stopping potential. Explain photoelectric effect on the basis of the quantum theory of radiation. Draw a photoelectric circuit.	TtPhotoelectric eantum theory of radiation. Einstein's photoelectric equation $h\nu = \phi + \frac{1}{2} mv^2$ and interpretation Workings of photocells Light on photographic plate and photochemical reaction

State Einstein's photoelectric equation.	Simple probl ems using photoelectric equations.
Evaluation methods: written and viva exams, performance observation.	Teaching / Learning activities and resources: classroom instruction and demonstration, return demonstration, models, solving related problems.
Unit 8: Modern Physics	
Sub-unit 8.3: X-ray	**Hrs. theory 4 Hrs. lab**
Objectives:	Content:
Draw well labeled diagram of modern x-ray tube. Explain the production mechanism of x rays(Coolidge X-ray tube) Discuss the properties and uses of x-rays	Production, nature and use of x-rays. Property of x-rays. Various uses of x-rays Simple numerical problems
Evaluation methods: written and viva exams, performance observation.	Teaching / Learning activities and resources: classroom instruction and demonstration, return demonstration, models, solving related problems.
Unit 8: Modern physics	
Sub-unit 8.4: Radioactivity	**Hrs. theory 5 Hrs. lab**
Objectives:	Content:
Explain the difference between natural and artificial radioactivity. List the main properties of α, β and γ radiation. Explain why these forms of radiation have energy on the order of mega electron voltage. Write down the equations for the laws of radioactivity. Write down the formula that shows that the relationship n between half-life and decay are constant. Graph the decay of radioactivity with time. Explain the principle involved in radio carbon dating.	Radioactivity. Properties of α, β and γ radiations. Laws of radioactive disintegration. The constant relationship between half-life and decay. Medical uses of radiation and artificial radioactive Decay Equation Simple numerical problems.
Evaluation methods: written and viva exams, performance observation.	Teaching / Learning activities and resources: classroom instruction and demonstration, return demonstration, models, solving related problems.
Unit 8: Modern physics	
Sub-unit 8.5: Properties of nucleus	**Hrs. theory 4 Hrs. lab**
Objectives:	Content:
Describe the constituents of a nucleus. Classify different types of nuclei.	The constituents of nuclei. Isotopes and mass numbers of different

Define unified atomic mass units (amu), mass defect, binding energy and binding energy per nucleons. Calculate the mass defect and binding energy of a nucleus. Calculate energy equivalence of mass in joules, eV, and MeV. Explain Einstein's mass-energy relationship theory. Calculate energy released from the decay of a radioactive substance. Define fission & fusion.	elements. Isotope instability. $E = mc^2$ Fission, fusion and energy released from these nuclear reactions. Radiation hazards and safety. Calculate mass defect, loss of mass due to radioactive disintegration numerically. Biological effect of nuclear radiations Simple numerical problems
Evaluation methods: written and viva exams, performance observation.	Teaching / Learning activities and resources: classroom instruction and demonstration, return demonstration, models, solving related problems.
Unit 8: Modern physics	
Sub-unit 8.6: Biophysics	Hrs. theory 4 Hrs. lab
Objectives:	Content:
The place of biophysics in natural science. The relationship between physics and biology. Physics and Proteins (The goal of protein physics) Nature of nucleic acid. Physics of the nerve impulse. The action and the nerve impulse.	The place of biophysics in natural science. The relationship between physics and biology. Physics and Proteins (The goal of protein physics) Nature of nucleic acid. Physics of the nerve impulse. The action and the nerve impulse.
Unit 8: Modern physics	
Sub-unit 8.7: Physics and Society	Hrs. theory 4 Hrs. lab
Objectives:	Content:
Describe how our environment is being destroyed due to noise pollution, air pollution water pollution, radiation pollution Discuss the wide spectrum of electromagnetic radiation from radio waves to cosmic rays. Discuss ozone depletion, greenhouse effect, acid rain. Discuss strategies to reduce pollution at local and national levels.	Deteriorating conditions of the environment we live in. Useful and harmful aspects of radiation. Concepts about ozone depletion, greenhouse effect and acid rain. Environmental protection strategies
Evaluation methods: written and viva exams, performance observation.	Teaching / Learning activities and resources: classroom instruction and demonstration, return demonstration, models, solving related problems.

Course: Physics	
Practical	Hrs. lab 30
Objectives:	Content:
16. Verify Ohm's law by using an Ohm meter and volt meter. 17. Demonstrate the variation of lateral displacement with an angle of incidence in a rectangular slab. 18. Determine the refractive index of a prism using the I-D curve method. 19. Determine velocity of sound in air at NTP using resonance tube apparatus 20. Determine angle of dip in the laboratory 21. Determine frequency of AC source using sonometer 22. Comparison of resistances by using meter bridge. 23. Determination of resistivity of a given wire by using meter bridge. 24. Determine the magnetic moment and pole-strength of a bar magnet by locating the neutral points, keeping N-pole pointing North. 25. Determination of magnetic moment of a bar magnet by using deflection magnetometer. 26. Determine magnetic moment of a bar magnet with it's north pole pointing south.	Application of theory form preceding units.
Evaluation methods: written and viva exams, performance observation.	Teaching / Learning activities and resources: classroom instruction and demonstration, return demonstration, models, solving related problems.

Recommended Texts

1. Brij Lal and Subramanyan, Principles of Physics.
2. Nelkon and Parker, Advanced Level Physics (5th ed.)
3. Physics Practical Manual, Basanta Raj Rosyra (second edition)

Reference Texts

1. Pradhan, J.M. & Gupta, S.K., A Textbook of Physics (part I & II)
2. Verma, H.C., Concepts of Physics I & II
3. Sears, Zemansky & Young, University Physics
4. Halliday, D & Resnick, R., Physics Part I & II
5. M.V Volkenshtin

Anatomy & Physiology of Skin, Hair & Nail

Year: 1st	**Total: 5 hrs/W (75 hrs)**
Part: II	**Theory: 3 hrs/W (45 hrs)**
Semester: II	**Practical: 2 hrs/W (30 hrs)**
Program : Diploma in Beauty and cosmetology	

Course description:
This course provides basic knowledge of the normal structure and function of Skin, Hair and Nail of human body. The content prepares the student to understand the conditions, diseases and disorders related to Skin, Hair and Nail.

Course Objective:
After the completion of this course student will be able to:

1. Explain the normal anatomy and function of skin, hair and nail.
2. Explain the importance of beautification of skin, nail and hair for beauty and health.
3. Apply the knowledge of anatomy and physiology to provide optimum Beauty related services.

Course content

Theory

Unit 1: Anatomy and Physiology (Introduction) **4 hrs**

1.1 Definition of Anatomy and Physiology
1.2 Anatomical Position of the body.
1.3 Main Cavities (Cranial, Thoracic, Abdominal and Pelvic)
1.4 Anatomical Terms (Cardiac,Peritoneum, Organ, Thorax, pelvic)

Unit 2: Introduction to cells and tissues **4 hrs**

2.1 The structure & function of Tissues, membranes, cartilage and their types
- Epithelial tissue,
- Connective tissue,
- Muscular tissue,
- Nervous tissue

2.2 The structure & functions of human cell
- Mitosis,
- Meiosis

Unit 3: Systems of the body **5 hrs**

3.1 Skeletal System
3.2 Muscular System
3.3 Nervous System
3.4 Endocrine System
3.5 Cardiovascular System
3.6 Lymphatic System
3.7 Digestive System

3.8 Respiratory System
3.9 Urinary System
3.10 Reproductive System

Unit 4: Human Growth & Development **8 hrs**

4.1 Embryionic and foetal development.
4.2 Foetal circulation and neonatal changes.
4.3 Characteristics of the stages of life development:
- Neonatal
- Infancy
- childhood
- adulthood
- senescence
- Causes of aging.

4.4 Terms related to growth and development: (amnion, chorion, embryo, foetus, neonatal, placenta, postnatal, prenatal, umbilical cord, zygote)

Unit 5: Anatomy and physiology of Skin **8 hrs**

5.1 Introduction
5.2 Basics of Skin Development
5.3 Components skin
5.4 Types of the Skin
5.5 Structure of Epidermis.
5.6 Structure of Dermis
5.7 Functions of the Skin
5.8 Skin care
5.9 Appendages of the skin
- Eccrine and Apocrine glands
- Pilosebaceus gland

5.10 Common Skin Disorders- Acne, Melasma, Frecles, Moles, Hyperpigmentation, Hypopigmentation, Contact Dermatitis, Eczema, Psoriasis, Fungal Infections, Bacterial Infections, Viral Infections.

Unit 6: Anatomy and physiology of the Nail **8 hrs**

6.1 Introduction
6.2 Development/growth
6.3 Structure of nail
6.4 Functions of nail
6.5 Nail care
6.6 Common Nail Disorders- Paronychia, Onychomycosis, Dermatosis affecting nails (psoriasis, lichen planus, Dariesr's disease), Nail tumors.

Unit 7 : Anatomy And Physiology of Hair **8 hrs**

7.1 Introduction
7.2 Development and
7.3 Distribution
7.4 Hair follicle

7.5 Anatomy of hair
7.6 Physiology
7.7 Hair care
7.8 Common Hair Disorders- Alopecia areata, androgenic alopecia, cicatricial alopecia, hypertrichosis, hirustism)

Practical: **30 hrs**

Group discussion, demonstration and viva

1. **Draw the system of body :**

- Skeletal system
- Muscular System
- Nervous System
- Endocrine System
- Cardiovascular System
- Lymphatic System
- Digestive System
- Respiratory System
- Urinary System
- Reproductive System

2. Identify Common Hair Disorders
3. Identify Common Nail Disorders
4. Identify Common skin Disorders

References:

- BD Chaurasia Text book of Anatomy, Nepal Medical Association Curriculum 2010
- Rooks Text book of Dermatology
- Chevalking H, Tuladhar K, Shrestha U. Integrated Science Related to Health, (2005); HLMC, IOM.
- Ghimire R.K & Gurung G. Basic Anatomy and Physiology, HLMC, IOM.
- Wangh & Grant, A, Ross and Wilson. Anatomy and Physiology in Health and Illness 2nd ed. (2006): Churchill Livingstone Elsevier.
- Windood, R.S., Sear's. Anatomy and Physiology for Nurses (1985): English Language Book Society.

Removal of Superflous Hair

Year: 1st **Part: II** **Semester: II** **Program : Diploma in Beauty and cosmetology**	**Total: 6 hrs/W (90 hrs)** **Theory: 2 hrs/W (30 hrs)** **Practical: 4 hrs/W (60 hrs)**

Course Description:
This course is designed to provide the students fundamental knowledge and skills on removal of superfluous hair. This includes knowledge on tools, equipments, cosmetics products etc used in this field and safety precaution.

Course Objectives:

On completion of this course, the trainees/ students will be able to:-

1. Identify superfluous hair.
2. Explain the purpose of removing superfluous hair.
3. Explain the various removal methods.
4. Identify the removal tools, equipment and products.
5. Perform various removal methods.
6. Apply safety precaution during and after the service.

Course Contents

Unit 1: Removal of Superfluous hair **4 hrs**

1.1Introduction
1.2Purpose
1.3 Benefits

Unit 2: Temporary Method **16 hrs**

2.1 Temporary Method (Depilation and Epilation)
2.1 Depilation

- ❖ Introduction
- ❖ Pros and Cons
- ❖ Materials
- ❖ Mixing
- ❖ Timing
- ❖ Procedure
- ❖ Patch test
  - Introduction
  - Importance
  - Procedure

2.2 Epilation

2.2.1Shaving

- Introduction
- Pros and cons
- Types

a) Razor Shaving

- Procedure
- Benefits

b) Electric Shaving

- Procedure
- Benefits/advantages

2.3 Tweezing

2.3.1 Introduction
2.3.2 Pros and Cons
2.3.3 Materials
2.3.4 Procedure

2.4 Waxing

2.4.1 Introduction
2.4.2 Purpose
2.4.3 Pros and Cons
2.4.4 Safety and Sanitization
2.4.5 Method
2.4.6 Advantages
2.4.7 Types

a) Strip Waxing
   - Introduction
   - Materials/tools
   - Wax temperature
   - Procedure
   - Contra indications
   - Types of Wax
     - Hot Wax
     - Warm Wax
     - Cold Wax

b) Stripless Waxing

   - Introduction
   - Material
   - Procedure
   - Contra indications

- Types of Wax

2.5 Threading

2.5.1 Introduction
2.5.2 Benefits/advantages
2.5.3 Materials
2.5.4 Eyebrow arching
- Introduction
- Benefits
- Methods (Eyebrow arching as facial shape)
- Procedure
- Materials, tools, cosmetics and care products

Unit 3: Permanent Method **4 hrs**

3.1 Electrolysis
3.2 Thermolysis
3.3 Blend
3.2 Laser hair removal
3.3Intensive pulse light

Unit 4: Bleaching/lightning superfluous hair **6 hrs**

4.1Introduction
4.2Pros and cons
4.3 Materials
4.4 Patch test
- Introduction
- Advantages
- Mixing
- Timing
- Procedures

4.5 Procedure
4.6 Contraindications
4.7 Safety

Practical: 60 hrs

Perform the following skills:

1. Perform eyebrow arching: 10 hrs
2. Temporary Method 20 hrs

2.1 Perform Depilation
2.2 Perform Epilation
2.3 Perform Shaving
2.4 Perform Tweezing

3. Perform Waxing 20 hrs

- Strip Waxing
- Non Strip Waxing
    - Hot Wax
    - Cold Wax
    - Lipo Wax

4. Perform Bleaching 10 hrs

Reference book:

- The Ultimate Beauty Book (Sally Norton, Kate Shapland, Jacki Wadeson) Publication Date : 1996, London

Nail Health and Beautification

Year: 1st **Part: II** **Semester: II** **Program : Diploma in Beauty and cosmetology**	**Total: 6 hrs/W (90 hrs)** **Theory: 2 hrs/W (30 hrs)** **Practical: 4 hrs/W (60 hrs)**

Course Description:
This course is designed to provide the students fundamental knowledge and skills on nail and hand care and beautification /artistry of nails. This includes knowledge on tools, equipments, cosmetics products, safety and hygiene of applied in the while performing the task.

Course Objectives:
On completion of this course, the trainees/ students will be able to:-

1. Explain nail structure and growth of nails.
2. Explain the nail disorders.
3. Identify implements, equipment and supplies necessary for manicure services.
4. Perform basic manicure.
5. Perform reconditioning manicure/hot oil treatment.
6. Perform Paraffin treatment
7. Perform nail-polish technique
8. Perform the pedicure service
9. Explain the importance of safety precautionin the service delivery.

Course Contents

Theory **30 periods**

Unit 1: Nails **4 hrs**

1.1 Introduction
1.2 Nail Growth
1.3 Nail Structure
1.4 Nail Disorders

- Onychorrhexis: - cuticle problems
- Corrugations: - long ridges over the nail
- Hypertrophy: - thickening of the nails
- Onychatrophia: - very thin & fragile nails
- Onychocryptosis: - ingrowing nails
- Lenconychia: - white spots on the nail plate.
- Onychocyanosis:- blue nail
- Hematoma nail:- thin flexible nails
- Deformed nail: - damaged by excessive pressure.

- Hang nail: - a small torn piece of skin next to finger nail.

1.5 Nail shapes

- Round
- Oval
- Square
- Pointed
- As per trend

Unit 2: Manicure 4 hrs

2.1Nail Treatment

- Introduction
- Benefit/advantages
- Tools, implements, care products, cosmetics

2.2 Purpose of manicure
2.3 Preparation for manicure
2.4 Plain or water manicure
2.5 Reconditioning/Hot oil manicure
2.6 Paraffin manicure
2.7 Nail polish technique
2.8 Equipment, implements and cosmetics for manicure

Unit 3: Massage for manicure 4 hrs

3.1 Full hand massage

- Process
- Benefits
- Do's and Dont's
- Materials
- Procedure

Unit 4: Artificial nails **4 hrs**

4.1 Introduction
4.2 Types of artificial nails

- Sculptured nails
- Gel nails
- Fiber Glass nails
- Tips and extensions

4.3 Repair Techniques

- Nail wrap techniques
- Fill-ins
- Removing sculptured nails

4.3 Benefits/advantages

Unit 5 Pedicure **4 hrs**

5.1 Introduction
5.2 Nail treatment
5.3 Purpose of pedicure
5.4 Preparation for pedicure
5.5 Types of pedicure
- Plain or water pedicure
- Reconditioning/hot oil pedicure
- Paraffin pedicure

5.6 Equipment for pedicure
5.7 Cosmetics and care products
5.8 Procedure for pedicure
5.9 Procedure for foot massage
5.10 Do's and Don'ts of pedicure

Unit 6: Health and Safety **2 hrs**

6.1 Infection control for Nail Specialist
6.2 Safety for the Nail Technician

Unit 7: French manicure **2hrs**

7.1 Introduction
7.2 Procedure for French manicure
7.3 Cosmetics for French manicure

Unit 8 Nail Art Designs **4 hrs**

8.1 Introduction
8.2 Types
- Brush nail art
- Water nail art
- Sticker nail art
- Stamp nail art
- Fabric nail art
- Stone nail art
- Glitter nail art
- Crayon nail art
- Sworosky crystal nail art
- Toothpick nail art
- Acrylic nail art

Unit 9: Nail Polish **2 hrs**

- Introduction
- Benefits/advantages
- Shade selection
- Nail polish application technique

- Procedure
- Nail polish removal technique

Practical: **60 hrs**

Perform the following skills

• Perform manicure	16 hrs
• Perform pedicure	16 hrs
• Perform French manicure	6 hrs
• (Perform Manicure with hot oil ,Perform Paraffin treatment)	4 hrs
• Perform nail-polish technique	6 hrs
• Perform basic Nail Art	12 hrs

Reference books: The Ultimate Beauty Book (Sally Norton, Kate Shapland, Jacki Wadeson) Publication Date: 1996, London

Diet and Nutrition

Year: 1st **Part: II** **Semester: II** **Program : Diploma in Beauty and cosmetology**	**Total: 2 hrs/W (30 hrs)** **Theory: 2 hrs/W (30 hrs)** **Practical: 0 hrs/W (0 hrs)**

Course Description:
This course is designed to provide students the fundamental knowledge of digestive system and the Nutrients, food groups including the balance diet which has been recommended by the RDA. The students will also get informed regarding the nutrients essential for beautiful skin, nail and hair.

Course Objectives:
After the completion of this course, the student will be able to:

1 Identify the parts of digestive organ
2 List the Enzymes of secreted by various digestive organs and glands
3 Identify the categories of nutrients.
4 Explain the different Food Groups.
5 Explain Balance Diet.
6 Explain the importance of the balance diet.
7 Explain the role and importance of nutrients to make hair, skin and nail beautiful and healthy.

Course Contents

Unit 1: Introduction **2 hrs**

1.1 Course Introduction
1.2 Digestion and Absorption
1.3 Energy

Unit 2: Nutrition **6 hrs**

2.1 Define
- Nutrients
- Food
- nutrition
- Electrolytes
- Dietetics

2.2 Classification of food
a Classification by origin
- Food of animal origin
- Food of vegetable origin

b Classification by chemical composion
- protein
- Fats
- Carbohydrate

- vitamins
- Minerals

c Classification by predominant function

- Energy giving foods- Cereals, Sugar, Roots ,Tubers and Fats and Oils
- Body building foods - Milk, Meat, Fish, Egg, Pulses, groundnuts
- Protective foods- Vegetable, Fruits

d Classification by nutrient value

- cereals and Millets
- Pulses
- Vegetables
- Nuts and Oilseeds
- Fruits
- Miscellaneous foods

2.3 Explain the relationship between nutrition and health

- growth and development
- specific deficiencies

2.4 Type of nutrients

- Macro nutrients (protein, fat and carbohydrate)
- Micro nutrients (vitamins and minerals)

Unit 3: Nutrients **8 hrs**

3.1 Carbohydrates
3.2 Proteins
3.3 Fats (Lipids)
3.4 Vitamins

Fat soluble Vitamins

- Vitamin A
- Vitamin D
- Vitamin E
- Vitamin K

Water solubleVitamins

- Vitamin B1
- Vitamin B2
- Vitamin B3
- Vitamin B6
- Vitamin B12
- Vitamin C

3.5. Minerals

- Calclum
- phosphorus
- sodium
- potassium
- Magnesium
- Iron

- Iodene

3.6. Water

Unit 3 Nutritional profiles of principle foods **6 hrs**

3.1 Cereals and Millet
- Rice
- Wheat
- Maize
- Ragi
- Jowar
- Bajra

3.2. Pulses (legumes)
- Soyabean

3.3. Nuts and Oilseeds

3.4. Vegetables
- Green vegetable
- Roots and Tubers
- Other vegetable

3.5. Fruits

3.6. Milk and milk products

3.7. Egg, Meat, Fish and alternatives

3.8. Fats and Oils

3.9. Sugar and Other Carbohydrate foods

3.10. Spice and Condiments

Unit 4: RDA and Balance Diet **4 hrs**

4.1 RDA (Recommended Dietary Allowances)
a) Vitamin
b) Minerals
c) Protein

4.2. Balance Diet
a) Food Pyramid
b) According to Age
c) According to Daily Metabolic Activity

Unit 5: Diets and Nutrition for Beautiful **4 hrs**

4.1. Skin
a) Essential Vitamin
b) Essential Minerals

4.2. Hair
a) Essential Vitamin
b) Essential Minerals

4.3. Nail
a) Essential Vitamin
b) Essential Minerals

Reference Books:

1. Advance Text Book on Food and Nutrition Volume 1 and Volume 2 by Dr. M. Swaminathan, Bappco Publications, India -2008
2. Nutrition and Health by Prof Dr. Rameshkant Adhikari, Educational Publishing House- Kathmandu, 2068 BS
3. Food and Nutrition by Harbans Lal, CBS Publishers & Distributors, India-2009
4. Swastha ra Posan by Padma Vagle, Vidyarthi Pustak Bhandar, Kathmandu, 2053BS
5. Kesh ko Sondarya, Samasyara ra Samadhan by D. B. Gurung 2063 BS
6. ISBN 978-99946-2-180-4

Applied Cosmetology

Year: 1st **Part: II** **Semester: II** **Program : Diploma in Beauty and cosmetology**	**Total: 3 hrs/W (45 hrs)** **Theory: 2 hrs/W (30 hrs)** **Practical: 1 hrs/W (15 hrs)**

Course Description:

Applied Cosmetology course is designed to provide students the correct application of the cosmetics available in the present market. Cosmetics are the substances that are applied on any part of body which includes face, hand, hair, feet and helps to beautify these parts. Cosmetology is the art and science of beauty care. Cosmetology involves the care of skin, hair, scalp and nails. The course emphasizes on the process that enhance someone's personal beauty.The students will be familiarize with the types of cosmetics developed according to different means and aspects.

The practical component of this course is designed to learn through the application of learned theory.

Objectives:

After the completion of this course the students will be enabled to:

1. Perform the correct application of the cosmetics.
2. Identify the different types of cosmetics and their development reasons.
3. Perform the best uses of the cosmetics for overall body care and beauty enhancement.

Theory: 30 hrs

Unit 1: Introduction

- Advantages

Unit 2: Types of Cosmetics

2.1 According to Base

- Powder
- Gel
- Cream
- Lotion

2.2 According to molecules

- Herbal
- Chemical
- Both

2.3 According to functions

- Protection
  - Sun Protection
  - Moisture loss
- Cleanse
  - Face Wash

- Body Wash
- Cleansing Bar(Soap)
- Cleansing Milk

- Beauty Enhancer(Makeup)
  - Compact Powder
  - Lip Sticks
  - Foundation
  - Base Cream
  - Concealer
  - Blush
- Beauty Enhancer (Skin)
  - Fairness
  - Moisturizing
  - Anti-Wrinkle
  - Toner

5.1 According to Skin

- Skin Types
  - Dry Skin
  - Oily Skin
  - Normal Skin
- Skin Condition
  - Dehydrated
  - Sensitive

Unit 3: Application of Cosmetics

3.1 Skin
3.2 Hair
3.3 Nail
3.4 Body
3.5 According to need
3.6 According to Fashion

Unit 4: Do and Don’t

Practical **15 hrs**

Unit 1: Perform the correct application procedures of Cosmetics:

1.1 Skin
- Care
- Enhancement

1.2 Hair
- Care
- Enhancement

1.3 Nail
- Care
- Enhancement

1.4 Body
- Care
- Enhancement

Reference Books

1. A Complete Book on Beauty, Body, Makeup and Hair Style- Ms Parvesh Hada, Goodwill Publishing House-2012
2. Complete Beauty Book- Helen Foster –ISBN 1-40543-228-4, Parragoan Publishing, USA, 2010
3. The Ultimate Beauty Book (Sally Norton, Kate Shapland, Jacki Wadeson) Publication Date: 1996, London
4. Hair Culture- B. Macfadden, Gemini Books-1994, ISBN-81-7439-003-0

Year: II

Semester: I

Subjects:

1. **Basic Principles of Dermatology**
2. **Basic Hair Performance and Cutting**
3. **Ecology and Environment**
4. **Cosmeceutical Pharmacology**
5. **Henna Art and Application**
6. **Hair Styling and Designing**
7. **Occupational Health, Hygiene and Safety**

Basic Principles of Dermatology

Year: 2nd **Part: I** **Semester: III** **Program : Diploma in Beauty and Cosmetology**	**Total: 4 hrs/W (60 hrs)** **Theory: 2 hrs/W (30 hrs)** **Practical: 2 hrs/W (30 hrs)**

Course description: This course is designed to give the knowledge and skill on the Principles, terminology and epidemiology of dermatology.

Course Objective:
After the completion of this course student will be able to

1. Explain the structures and functions of the skin.
2. Describe the physiology, biochemistry and immunology behind the skin.
3. Describe the various skin lesions.
4. Examine various skin lesions.

Course content

Theory

Unit 1: Anatomy of the skin: **8 hrs**

1.1. Microanatomy of skin
1.2. Derivatives of the skin

Unit 2: Physiology of skin **8 hrs**

2.1. Various functions of the skin according to the various derivatives such as the keratinocyte, hair, melanocyte, adnexae
2.2. Various disease processes according to the:
Epidermis Andadnexae: Keratinocytes, Melanocytes, Langerhans cells, DEJ Adnexae, Eccrine sweat units, Apocrine units, Hair follicles, Sebaceous glands, Nails

Unit 3: Biochemistry of the skin **6 hrs**

4.1. Biochemistry of the skin; keratin, melanin, collagen and glycosaminogly cosides
4.2. Skin surface secretions; sebum, sweat
4.3. Biochemistry of the subcutaneous fat

Unit 4: Immunology and Molecular genetics of the skin **8 hrs**

4.1. Immunological components of the skin
4.2. Various immunological functional systems
4.3. Various types of hypersensitivity reactions
4.4. Human chromosomes
4.5. Forms of inheritance of skin disorders and gene therapy

Practical

Unit 1: Perform the following tasks:
a) Identify the various structures: **20 hrs**

- skin,
- hair
- nail

and report to your Instructor
b) Draw the anatomical structure of skin.
c) List the functions of skin.

Unit 2: a) List the various Physiological functions of the skinto the various derivatives **10 hrs**
b) Correlate the various disease processes of

- skin,
- hair
- nail

Basic Hair Performances and Cutting

Year: 2nd **Part: I** **Semester: III** **Program : Diploma in Beauty and Cosmetology**	**Total: 8 hrs/W (120 hrs)** **Theory: 2 hrs/W (30 hrs)** **Practical: 6 hrs/W (90 hrs)**

Course Description:
This course is designed to give the students fundamental skills to maintain and style the hair as best possible by brushing, shampooing, conditioning, drying and cutting using the best methods and materials. Basic hair performances mean the hair beauty, shampooing, and conditioning. Cutting is the basis of any hair style.

Course Objectives:
After the completion of this course, the student will be able to:
1. Analyze the condition of hair.
2. Identify weaknesses of hair.
3. Apply the technique to improve its condition.
4. Handle the tools and accessories needed to deliver the services in the Salon.
5. Choose the appropriate method of cutting to get the best result in the finished style.
6. Perform a good shampoo/conditioning treatment and blow drying.
7. Create/Promote business.

Course Contents

THEORY

Unit 1: Hair tools and accessories **4 hrs**
- 1.1 Characteristics of hair
- 1.2 Hair Cutting Tools
- 1.3 Types of Tools
- 1.4 Handling tools

Unit 2: Water **2 hrs**
- 2.1 Types of Water
- 2.2 Importance in hair dressing service

Unit 3: Shampoo and conditioner **6 hrs**

3.1 Shampoo
- History
- Types
- Composition
- Tools
- Advantage
- Application Methods
- Rinsing Methods
- Handling Methods

- Drying Methods

3.2 Conditioner

- History
- Types
- Composition
- Tools
- Advantage
- Application Methods
- Rinsing Methods
- Handling Methods
- Drying Methods

Unit 4: Cutting Methods **6 hrs**

4.1 Cutting with scissors
4.2 Cutting with razor
4.3 Cutting with electric clipper
4.4 Cutting with a combination.

Unit 5: Client information and counseling **6 hrs**

5.1 Personality Profile
5.2 Fashion trends
5.3 Hair texture understanding
5.4 Client's choice (Hair Cutting Style)

Unit 6: Hair designing **6 hrs**

6.1 Basic Hair design
6.2 Steps and procedure
6.3 Partitioning
6.4 Making the guideline
6.5 Proceed cutting
6.6 Hair cut and style Checking
6.7 Finishing and Setting

PRACTICAL

Unit 1: Hair cutting tools **15 hrs**

1.1 Identify Hair Cutting Tools
1.2 Handletools
1.3 Perform pre hair cutting procedures

- Combing
- Brushing
- detangling (Dry and Wet Hair)

Unit 2: Shampoo and conditioning **20 hrs**

2.1 Shampoo

- Identify tools
- Handle tools

- Perform Application
- Perform Rinsing
- Perform Handling
- Perform Drying

2.2 Conditioning

- Identify tools
- Handle tools
- Perform Application
- Perform Rinsing
- Perform HandlingIdentify tools
- Handle tools
- Perform Application
- Perform Rinsing
- Perform Handling
- Perform Drying

Unit 3: Perform pre-hair cutting procedures **15 hrs**

3.1 Make Guidelines
3.2 Perform Partitions

Unit 4: Perform cutting with the following Methods **25 hrs**

4.1 Cutting with scissors
4.2 Cutting with razor
4.3 Cutting with electric clipper
4.4 Cutting with a combination.

Unit 5: Perform finishing **15 hrs**

5.1 Perform Style Checking
5.2 Perform Setting
5.3 Perform Finishing

Reference Books:

- The Van Dean Manual Professional training for beauticians.
- Haircutting Basics: An easy step by step guide to cutting hair the professional way- Martha G. Fernandez
- Haircutting Textbook-Certified Learning in Cosmetics

Ecology and Environment

Year: 2nd **Part: I** **Semester: III** **Program : Diploma in Beauty and Cosmetology**	**Total: 3 hrs/W (45 hrs)** **Theory: 3 hrs/W (45 hrs)** **Practical: 0 hrs/W (0 hrs)**

Course Description:
This course is designed to provide practical knowledge on ecology and environment and to conserve ecology for living being. It further relates the cosmetic products and human health to ecology and environment.

Course Objectives:
After the completion of this course, the student will be able to:
1. Explain ecological aspect.
2. Explain ecological process and cycle.
3. Familiarize with men – environment relations.
4. Classify ecosystem.
5. Explain the types of pollutions.

Course Contents

THEORY

Unit 1: Ecology 2 hrs
- 1.1 Introduction
- 1.2 Basic concept

Unit 2: Ecology and Ecosystem 4 hrs
- 2.1 Habitat Ecology
- 2.2 Fresh water Ecology
- 2.3 Marines Terrestrial Ecology
- 2.4 Desert Ecology

Unit 3: Environment and Pollution 8 hrs
- 3.1 Definition
- 3.2 Types of pollutions
  - Air Pollution
  - Water pollution
  - Soil Pollution
  - Noise pollution
- 3.3 Causes of pollution
- 3.4 Effects of pollution (Humidity, Ozone hole, Acid rains, global warming etc)

Unit 4: Environment and resources 8 hrs

4.1 Natural Resources (Air, Water, Wood)
4.2 Alternative Resources
4.3 Environmental problems
4.4 Environmental interactions

Unit 5: Ecological Aspect 10 hrs

5.1 Ecological process
5.2 Ecological cycle
5.3 Classification of Ecosystem
5.4 Community Ecology

Unit 6: Ecology causes and sustainability 5 hrs

6.1 Nature and Ecology
6.2. Population Ecology
6.3 Natural resources

Unit 7: Ecotourism 4 hrs

7.1 Introduction of Ecotourism
7.2 Ecotourism Area
7.2 Proposed area

Unit 8: Ecology and Environment in cosmetic product 4 hrs

8.1. Herbal raw material
8.2. Mineral raw material

Reference Books:

- Eudone P. Odum Ph.D Gray W. Barrett, Ph.D., Fundamental of Ecology, India, New Delhi.
- P. D Sharma, Ecology and environment, Meerut, India, Restogi Publications.
- Puskar K. Pradhan, Bandana Pradhan, Environment and Natural resources.
- Ronald M. Atlas, Richard Bastha, Fourth edition, Ecology, Fourth edition, Dorling (publishcations)
- G. Tyler Miller, Jr., People and Environment, New Delhi.
- Subodh Adhikari, Ecology and Environment, Kathmandu, Vdyasthi Prakashan. P. LTD

Cosmeceutical Pharmacology

Year: 2nd **Part: I** **Semester: III** **Program : Diploma in Beauty and Cosmetology**	**Total: 6 hrs/W (90 hrs)** **Theory: 2 hrs/W (30 hrs)** **Practical: 4 hrs/W (60 hrs)**

Course Description:
In this course we will be teaching the cosmeceutical pharmacology principles, drugs acting on skin and mucous membrane, Cosmeceuticals and practice, marketing, function and the skin barrier, Evaluating cosmeceutical efficiency, Cosmceutical Activities and Application of cosmeceuticals

Course Objectives:
After the completion of this course student will be able to

1. Familiarize with the fundamental of cosmeceuticals pharmacology.
2. Explain the modalities and different aspects of Cosmeceutical practice
3. Define the function of cosmeceuticals with regards to the skin barrier system.
4. Evaluate the cosmeceutical efficiency
5. Explain the various Cosmceutical Activities and role of Vitamin A, D, E, C, B
6. Explain the application of cosmeceuticals

Course content

Theory

Unit 1: General Cosmeceutical principles **3 hrs**

- 1.1. Introduction
- 1.2. Routes of drug administration
- 1.3. Pharmacokinetics
- 1.4. Pharmacodynamics
- 1.5. Adverse drug effects

Unit 2: Cosmoceuticles acting on Skin and mucous membrane **4 hrs**

- 2.1. Introduction
- 2.2. Demulcents
- 2.3. Emollients
- 2.4. Adsorbants and protectives
- 2.5. Astringents
- 2.6. Irritants and counter irritants
- 2.7. Caustics and escharotics
- 2.8. Keratolytis*
- 2.9. Anti Seborrheics*
- 2.10. Darkening agents*
- 2.11. Whitening agents*
- 2.12. Suncreens*: physical , chemical

Unit 3: Cosmeceuticals **9 hrs**

3.1. **Cosmeceuticals and practice:**

3.1.1. The cosmeceutical phenomenon
3.1.2. Cosmeceutical marketing
3.1.3. Growing demand
3.1.4. Product development
3.1.5. Challenges and opportunities
3.1.6. Client education and compliance
3.1.7. Dispensing products
3.1.8. Summary

3.2. **Function and the skin barrier**

3.2.1. Introduction
3.2.2. The stratum corneum as a target for cosmeceuticals
3.2.3. Natural rejuvenation of the skin
3.2.4. Cosmeceutical formulation considerations

- Introduction
- Vehicles
- Emulsions:
    - oil in water,
    - water in oil,
    - liquid crystal stabilised,
    - multiple emulsions
- Consideration in cosmeceutical emulsion technology:
    - pH,
    - Temperature
    - Particle size
    - Electrolyte considerations
    - Electrical charge ingredient considerations
    - Preservation considerations
    - Stability consideration
- Vehicle delivery systems:
    - mousses,
    - ointments/ sticks,
    - gels

3.2.5. Summary

3.3. **Evaluating efficiency**

3.3.1. Introduction
3.3.2. Intrumental methods related to visual assessments:
    - Image analysis,
    - Skin coloration
3.3.3. Instrumental methods related to Tactile assessments
3.3.4. Instrumental methods based on
3.3.5. Instrumental measurements based on Physical properties:
    - Skin hydration,
    - High frequency ultrasound
3.3.6. Summary and conclusion

Unit 4: Cosmeceutical Activities **8 hrs**

4.1. Introduction
4.2. Cosmeceutical vitamins: vitamin A,C,D,E,B
  - Introduction,
  - Terminology and definition,
  - Indication and biological activity
  - Mechanism of action
  - Photo protection by vitamin E
  - Practical usage regimens

4.3. Systemic/ dietary supplementation
4.4. Cautions, contraindications and adverse effects
4.5. Current research and possible future applications
4.6. Cosmeceutical vitamins:A
4.7. Cosmeceutical vitamins:D
4.8. Cosmeceutical vitamins: vitamin C
4.9. Cosmeceutical vitamins: vitamin B
4.10. Comeceutical Botanicas
4.11. Cosmeceutical moisturizers
4.12. Skin lightening agents
4.13. Nutritional antioxidants
4.14. Sunscreens
4.15. Cosmeceuticals and allergy

Unit 5: Application of cosmeceuticals **6 hrs**

5.1. Wrinkles and fine lines
5.2. Facial redness
5.3. Oily skin
5.4. Dry skin
5.5. Normal skin
5.6. Acne
5.7. Blemishes

Practical:

Perform the following skills: **60 hrs**

- Viva and demonstration
- Group discussion
- Describe the functions and formulation of different cosmeceuticals.
- Demonstrate the effect of various cosmeceuticals according the need of the client.

References:

1. Essentials of medical pharmacology 5thEdition, K.D.Tripathi
2. Procedures in cosmetic dermatology, COSMECEUTICALS, Zoe Diana Draelos
3. Dermatological and transdermal formulations, Drug and pharmaceutical science, A series of textbook and monographs, Kenneth A Walters, ©Marcel Dekker

Henna Art and Application

Year: 2nd **Part: I** **Semester: III** **Program : Diploma in Beauty and Cosmetology**	**Total: 6 hrs/W (90 hrs)** **Theory: 2 hrs/W (30 hrs)** **Practical: 4 hrs/W (60 hrs)**

Course Description:
Henna is an important thing in the field of cosmetics and it also carries many benefits to the hair. This course focuses on enhancing ones knowledge about Henna, its use and benefits. Similarly, it also helps student have a on hands training about various types of Henna arts and its application.

Course Objectives:
After the completion of this course, the student will be able to:
1. Explain the types of Henna.
2. Prepare Henna for different types of applications.
3. Describe the strategies of creating Henna patterns.
4. Describe the importance of Henna
5. Explain Henna aftercare.

Course Contents

THEORY

Unit 1: Introduction to Henna **4 hrs**

1.1 Introduction to Henna
1.2 History of Henna(Arabic/Jewish)
1.3 Applications (Basic and Advance)
- Hair

1.4 Henna Art(Strategy of creating)
- Hand and Feet
- Body
- Bridal
- Festive

1.5 Advantages of Henna
1.6 Do and Don'ts

Unit 2: Healthand Safety **6 hrs**

2.1 Henna and Glucose-6-Phosphate dehydrogenase deficiency
2.2 Hygiene for Henna Artists
2.3 Essential Oil Safety
2.4 Dermatitis

Unit 3: Henna Mixing **6 hrs**

3.1 Traditional recipe (Homemade)
3.2 Sara henna's recipe
3.3 BlueberryBuzz's recipe
3.4 Henna Muse's recipe
3.5 Henna Caravan's recipe

Unit 4: Henna Chemistry **8 hrs**

4.1 Natural stains of henna on skin
4.2 Mapping Henna stain on skin

Unit 5: Geographies of Henna **6 hrs**

5.1 Suitable climate for Henna growth
5.2 Geographies of Henna
5.3 Overview of Henna production and processing

PRACTICAL **60 hrs**

Unit 1: Preparation of Henna **6 hrs**

1.1 Prepare henna by the following methods of mixing:

- Basic mix of henna
- Sara henna's recipe
- Blueberry buzz's recipe
- Henna caravan's recipe

Unit 2: Henna on Hands **30 hrs**

2.1 Design basic patterns of henna.
2.2 Advanced patterns of henna art on hands
2.3 Creating professional henna art on hands

Unit 3: Henna On Feet **10 hrs**

3.1 Design basic patterns of henna.
3.2 Advanced patterns of henna art on feet
3.3 Professional henna art on feet

Unit 4: Henna On Hair **4 hrs**

4.1 Apply henna on hair.

Unit 5: Henna art for Body **10 hrs**

5.1 Perform free hand patterns.
5.2 Perform readymade patterns
5.3 Designpatterns of henna on different body parts.
5.4 Perform mapping of henna patterns in the body.

References

1. *Henna House- Nomi Eve*
2. *Teach Yourself Henna Tattoo: Making Mehendi Art with Easy –to – Follow Instructions, Patterns and Projects- Brenda Abdoyan*
3. *Henna Book- Sipi Beauty Club*

Hair Styling and Designing

Year: 2nd **Part: I** **Semester: III** **Program : Diploma in Beauty and Cosmetology**	**Total: 6 hrs/W (90 hrs)** **Theory: 2 hrs/W (30 hrs)** **Practical: 4 hrs/W (60 hrs)**

Course Description:

This course is designed to provide skill and techchniques for dyeing, cutting, styling and caring for hair. The course typically leads to certificates, experiences and even provide with related jobs at times. The students will learn to treat different types of hair in their respective way of styling and shaping.

Course Objectives:

After the completion of this course, the student will be able to:

1. Familiarize with hair styling.
2. Familiarize with basic terms used.
3. Differentiate face profiles.
4. Define physical features of a client.
5. Perform hair Artistry.
6. Use tools and techniques

THEORY

Course contents

Unit 1: Styling and designing techniques **10 hrs**

1.1 Introduction
1.2 Tools and equipment
1.3 Artistry in styling and designing
- Facial types (Oval, round, square, pear, oblong, diamond, heart)
- Neck types (short, long, thin)

1.4 Blow dry and styling
1.5 Hair extension
1.6 Wig application
1.7 Thermal hair styling
- Crimping
- Straightening
- waving

1.8 Face profiles and types
- straight,

- concave,
- convex,
- low forehead

Unit 2: Back Combing and pin curls **10 hrs**

2.1 Introduction
2.2 Tools and equipment
2.3 Comb out
- Back coming
- Back brushing

2.4 Finger waving
2.5 Pin curls
- Mobility of curl
- Curl and stem direction
- Shapings

2.6 roller curls and setting
- Wave Pattern
- Curved Line (Horizontal, Vertical, Diagonal)

2.7 Nourishment and care

Unit 3: Designing updos and buns **10 hrs**

3.1 Introduction
3.2 Tools and equipment
3.3 Basic terms used
3.4 Hair texture
3.5 Scalp and hair analysis
3.6 Various types
- Traditional
- Bridal
- Casual
- Modern

PRACTICAL **60 hrs**

Unit 1: Back Combing, pin curls and roller setting **25 hrs**

1.1 Identify Tools and equipment
1.2 Perform Comb out
- Back combing
- Back brushing
- Hair Stuffing

1.3 Perform Finger waving

1.4 Perform Pin curls
- Mobility of curl
- Curl and stem direction
- Shaping

1.5 Perform Roller curls and setting
- Wave Pattern
- Curved Line (Horizontal, Vertical, Diagonal)

1.6 Perform Braiding

1.7 Perform Plating

1.8 Perform Twisting

Unit 2: Styling and Designing **15 hrs**

2.1 Perform Blow dry and styling
- Hair Straightening
- Hair Curls
- Hair Management

2.2 Perform thermal hair styling
- Crimping
- Straightening
- Waving
- Hair Management

Unit 3: Perform Wig Applications **10 hrs**

3.1 Full Hair Wig

3.2 Partly hair wig /Wig let

3.3 Modern and Latest Wig

Unit 4: Hair Up-Dos (Hair Put-on) **10 hrs**

4.1 Identify Hair texture

4.2 Identify Scalp and hair analysis

4.3 Perform Hair Up-dos
- Nepali Traditional
- Casual
- Bridal
- Modern
- Latest

Occupational Health, Hygiene and Safety

Year: 2nd **Part: I** **Semester: III** **Program : Diploma in Beauty and Cosmetology**	**Total: 4 hrs/W (60 hrs)** **Theory: 2 hrs/W (30 hrs)** **Practical: 2 hrs/W (30 hrs)**

Course Description:

This course is planned for the student to describe the importance and the role of Occupational Health, Hygiene and Safety in the profession of Beauty and cosmetology industry. Student will get complete information and can implement and practiceon occupational Health, Hygiene and Safety rules and regulations.

Course Objectives:
After the completion of this course, the student will be able to:

1. Set up the work area to meet standard hygiene and treatment requirements
2. Clean and sterilize all tools and equipment before use
3. Maintain industry hygiene and safety practices throughout the work routine
4. Dispose waste materials safely and correctly
5. Identify harmful working practices in the workplace
6. Report health and safety risks/ hazards to concerned personnel
7. Monitor the contra-indications related to beauty treatments and follow preventive measures.

Course Contents

THEORY

Unit 1: Occupational Health, hygiene and Safety **1 hrs**

Introduction

Unit 2: Microbiology **5 hrs**

2.1 Introduction

- Branches of microbiology
- Types of Microorganisms

2.2 Parasitology

Parasites

- Introduction
  Lice and kit
- Routes of transmission of parasitic infestation

2.3 Bacteriology

Bacteria

- Introduction
- Classification

2.4 Virology

Introduction of Virus

- Characters of virus
- Morphology of virus

2.5 Mycology

Introduction

- Fungal infections
- Prevention and control of fungal infection

Unit 3: Immunology **1 hrs**

3.1 Introduction to immunology
3.2 Antigen and antibody
3.3 Hypersensitivity reaction

Unit 4: Hygiene **2 hrs**

3.1 Personal and Public
3.2 Hygiene in work place

Unit 5: Infection control **4 hrs**

- Definition and principles
- Hand washing techniques
- Universal Precautions

4.2 Instrument processing

- Decontamination of articles
- Cleaning
- High level disinfection
- Sterilization:
  - purpose,
  - principles,
  - method

Unit 6: Salon waste disposal **1 hr**

Unit 7: Occupational Health and Hazards **4 hrs**

7.1 Physical hazards

- Salon
- Manual

7.2. Chemical hazards
7.3. Electrical hazard
7.4. Biological hazards
7.5. Radiation hazards

Unit 8: Occupational Safety Measurements **4 hrs**

6.1 Plan of preventions of the hazard
6.3 Implementation of Occupational Safety Measurements

Unit 9: First Aid

Introduction **8 hrs**

Burn

- Definition
- Types
- Calculation of Burn
- Signs / Symptoms
- Management and refer

Shock

- Definition
- Types
- Cause
- Signs/Symptoms
- Management and refer

Sun burn

- Definition
- Signs/Symptoms
- Prevention and management

Hemorrhage

- Definition
- pressure point
- management and refer

PRACTICAL **30 hrs**

Unit 1: Maintain Personal Hygiene **2 hrs**

1.1 Examine the costume neatness (by seeing folding, shoes and shocks)
1.2 Maintain adequate distance between client and service provider.
1.3 Maintain personal hygiene like wearing caps, tying hair, file nails, use of deodorants/Mouth Wash, Gloves by following the basic steps

Unit 2: Maintain Workplace Hygiene **4 hrs**

2.1Maintain workplace cleaning: Perform Flooring and Furnishing using appropriate tools
2.2 Check cleanliness of workplace materials (washed linen, towels, gowns, apron, work tops shoes, sandals and uniform worn at the workplace.)
2.3 Perform cleaning process of toilets and floor with Liquid Soap, Rust Remover, Phenyl and Quats.
2.4 Store tools and equipment
2.5 Report potential hygiene risks (breakage and leakages)

Unit 3: Sterilize and Sanitize tools and equipment **6 hrs**

3.1 Identify and classify agents for sanitization and sterilization.
3.2 Sanitize/ sterilizetools, equipment and accessories.(HLD)

Unit 4: Dispose of Cosmetic waste, tools and equipment **4 hrs**

4.1 Identify and classify re-usable and disposable tools.
4.2 Performsafety measurements before handling disposable items (Putting Face mask and Gloves).
4.3 Segregate saloon waste, cosmetic waste material, tools and equipment.
4.4 Dispose saloon waste, cosmetic waste material, tools and equipment as per Safety measurements.

Unit 5: Follow occupational Health and Safety rules **4 hrs**

5.1 Identify and practice individual responsibilities to workplace health and safety
5.2 Plan, organize and follow safe work techniques to deal with hazardous or in emergency situations.
5.3 Unplug all the equipment when not in use
5.4 Keep all routes and fire exits clear.
5.5 Follow the Sanitization and segregation methods of used cosmetics, creams and makeup products.

Unit 6: First Aid Practice **10 hrs**

6.1. Identify the necessity of First Aid
6.2. Followmethods and procedure of First Aid
6.3. Manage and maintain practices of First aid

Reference Books:

1. First Aid Step by Step by John Camm and Tim McCarthy, CBS Publishers and Distributors, India, 2003
2. Hospital Sterilization by Prem Anand Nagaraja, Jaypee Brothers, India-2011
3. Human Physiology and Microbiology by Ms. Laxmi Keshari Manandhar, Educational Publishing House, 2066 BS

Year: II

Semester: II

Subjects:

1. **Facial treatment I**
2. **Basic make up**
3. **Hair and chemicals I**
4. **Advance hair cutting and styling**
5. **Hair and scalp treatment**
6. **Dermatological diseases**

Facial Treatment I

Year: 2nd **Part: II** **Semester: IV** **Program : Diploma in Beauty and Cosmetology**	**Total: 6 hrs/W (90 hrs)** **Theory: 2 hrs/W (30 hrs)** **Practical: 4 hrs/W (60 hrs)**

Course Description:
This course is designed to provide the students fundamental knowledge and skills on management of skin which includes supervisory functions such as facial & properly care for the skin so that degeneration of the skin does not go too fast.

Course Objectives:
After the completion of this course, the student will be able to:
a. Analyze the skin and skin types.
1. Perform base massage for body relaxation.
2. Perform cleansing of the eyes, lips, Face, Neck, Sternum & Shoulders.
3. Perform exfoliation of Face, Neck, Sternum& shoulders.
4. Perform facial massage stroke of Face, Neck, Sternum & shoulders.
5. Apply skin face mask.
6. Apply post facial products for skin protection.

Course Contents

THEORY

Unit 1: Facial **8 hrs**
- 1.1 Introduction
- 1.2 History
- 1.3 Importance
- 1.4 Dos & Don'ts

Unit 2: Basic Anamneses **8 hrs**
- 2.1 Introduction
- 2.2 Basic Technique/process
- 2.3 Skin & it's types
- 2.4 Do's & don't
- 2.5 Anamneses form

Unit 3: Expressions & lines **8 hrs**
- 3.1 Facial expression lines
- 3.2 Line formation
- 3.3 Reducing aging
- 3.4 How Facial helps for delaying aging/ advantages of facial

Unit 4: Connection between client & facial Therapist **6 hrs**
- 4.1 History taking and Anamneses form filling process **(**female & male client)

PRACTICAL

Total Time: 60 hrs

Unit 1: Personal Hygiene **3 hrs**

1.1 Perform self grooming and personal hygiene

Unit 2: Facial room cleaning arrangement **12 hrs**

2.1 Perform cleaning.
2.2 Arrange bed sheet & bed cover
2.3 Perform decoration of bed with towels
2.4 Perform towels folding techniques

Unit 3: Facial Briefing **5 hrs**

3.1 Perform briefing and debriefing on : as per the skin character

Unit 4: Prepare client before facial **5 hrs**

4.1 Prepare client before facial

- Change the cloths
- Put off the ornaments
- Put Towels and Head band

Unit 5: Bases Massage before Facial **15 hrs**

5.1 Perform relaxing of body & mind

- Press points on face and head
- Press Points on Shoulders
- Press Points on Legs
- Press Points on Hands

Unit 6: Facial **18 hrs**

6.1 Perform facial cleansing (face, neck, sternum& shoulders).
6.2 Perform Exfoliation (face, neck, sternum& shoulders).
6.3 Perform Facial Massage (face, neck, sternum& shoulders).
6.4 Perform facial Mask application & removal.
6.5 Perform post facial protection

Unit 7: Skin Protection **2 hrs**

7.1 Perform Daily Care and skin Protection.

- CTMPN

Reference:

ISBN 978-90-70502-32-4 A Ms. Janny Berends Beeuwkes from the Netherlands

Basic Make-Up

Year: 2nd **Part: II** **Semester: IV** **Program : Diploma in Beauty and Cosmetology**	**Total: 6 hrs/W (90 hrs)** **Theory: 2 hrs/W (30 hrs)** **Practical: 4 hrs/W (60 hrs)**

Course Description:

This course is designed to provide the students fundamental knowledge and skills on application of basic make up. This includes knowledge on tools, equipments, cosmetics products, safety, etc.

Course Objectives:

On completion of this course, the trainees/ students will be able to:-

1. Explain the purpose of makeup.
2. Describe the primary cosmetics used.
3. Apply makeup cosmetics.
4. Differentiate the types of makeup application.
5. Identify the makeup tools and cosmetics.

Theory:

Course Contents

Unit 1: Make -up 8 hrs

- Introduction
- Purpose
- Importance
- Forms
- Procedure
- Types of makeup application
    - Daytimes makeup
    - Evening makeup
    - Glamour makeup
- Make up Tools and their use 4 hrs
    - Brushes (thin liner to fat fully powder brushes)
    - Velour puffs
    - Make up sponges
    - Eyelash separator/brush/comb
    - Eyelash curler
    - Tweezers
    - Cotton wool ball
    - Sponge applicators

Unit 2: Make up Techniques 4 hrs

- Color selection
- Application
- Correction of facial shape
- Shadowing
- Emphasizing or highlighting
- Minimizing Weakness and emphasizing good features
- Colour blending
- Colour selection
- Professional touch
- Client suitability
- Quality cosmetics
- Innovation/creativity

Unit 3: Cosmetics used in Make up: 8 hrs

3.1 Foundation

3.1.1 Introduction

3.1.2 Importance

3.1.3 Forms/types

- Tinted moisturizer
- Liquid foundation
- Cream foundation
- Mousse Foundation
- Compact Foundation
- Stick foundation
- Cake foundation

3.1.4 Shade Selection

3.1.5 Application tools

3.1.6 Procedure

3.1.7 Professional finish

3.2 Concealer

3.2.1 Introduction

3.2.2 Importance

3.2.3 Forms

- Stick concealer
- Cream concealer
- Liquid concealer
- Pencil concealer

3.2.4 Shade Selection

3.2.5 Application tools

3.2.6 Procedure

3.2.7 Professional finish

3.3 Powder
- 3.3.1 Introduction
- 3.3.2 Importance
- 3.3.3 Forms
  - Compact/press
  - Loose
- 3.3.4 Shade Selection
- 3.3.5 Application tools
- 3.3.6 Procedure
- 3.3.7 Professional finish

3.4 Blusher
- 3.4.1 Introduction
- 3.4.2 Importance
- 3.4.3 Forms
  - Cream
  - Powder
- 3.4.4 Shade Selection
- 3.4.5 Application tools
- 3.4.6 Procedure
- 3.4.7 Professional finish

3.5 **Eye make-up cosmetics**
- 3.5.1 Introduction
- 3.5.2 Importance
- 3.5.3 Forms
  - Eyebrow colour/pencil
  - Eyeliner
  - Mascara
  - Eye shadow
  - Gaajal
- 3.5.4 Color Selection
- 3.5.5 Application tools
- 3.5.6 Procedure
- 3.5.7 Professional Finish

3.6 Lip cosmetics
- 3.6.1 Introduction
- 3.6.2 Importance
- 3.6.3 Forms
  - Lipstick
  - Lipcolor
  - Lip gloss
  - Lip liner

3.6.4 Color Selection
3.6.5 Application tools
3.6.6 Procedure
3.6.7 Professional Finish

3.7 **Bindi/ tika**

- Introduction
- Importance
- Shapes and sizes

Unit 4: Make up Procedures **2 hr**

Unit 5: Make-up removal technique **2 hrs**

- Introduction
- Importance
- Procedure
- Materials and products

Unit 6: Safety in makeup **2 hrs**

- Eye protection
- Tools/ equipments Sanitization
- Nails filing
- Use of spatula to remove products
- Hands sanitizations
- Discard of used sponges
- Drapes sanitization
- Safe use of eyeliner/lip liner/eyebrow pencil
- Use of updated/fresh and quality products.
- Ventilated classrooms/parlours

.

Practical: **60 hrs**

Perform the following skills:

- Perform Casual makeup 10 hrs
- Perform Party makeup. 10 hrs
- Perform glamour makeup. 10 hrs
- Perform Corrective Makeup 20 hrs
- Perform a makeup, innovating your own technique. 10 hrs

Reference book:

The Ultimate Beauty Book (Sally Norton, Kate Shapland, Jacki Wadeson) Publication Date: 1996, Londo

Hair and Chemicals I

Year: 2nd **Part: II** **Semester: IV** **Program : Diploma in Beauty and Cosmetology**	**Total: 6 hrs/W (90 hrs)** **Theory: 2 hrs/W (30 hrs)** **Practical: 4 hrs/W (60 hrs)**

Course Description:
This course is designed to provide the knowledge and skills on the modification of natural hair color by utilizing various application methods and using a colorant product to chemically treat hair. It also includes relaxation techniques for the hair, head and scalp. The courses will guide the students in areas like basic color applications to cover the greys, and lightening or darkening of natural hair color. By the end of this course they will also have the ability to perform corrective color applications and create special effects using the techniques or any other advanced color application methods.

Course Objectives:
After the completion of this course, the student will be able to:

1. Familiarize with many hair styling chemicals and their application.
2. Differentiate between various hair types.
3. Know about coloring/hair dyeing, bleaching, lightening, highlights/frosting, lowlighting techniques.
4. Handle clients and analyzing the requirements.
5. Identify the effects of chemicals on hair.
6. Be thorough with the "do's and don'ts" in this line of work.

COURSE CONTENTS

Unit 1: Hair coloring/dye techniques **6 hrs**

- 1.1 Introduction
- 1.2 Scalp and hair analysis
- 1.3 Safety and precautions
- 1.4 Basic color knowledge
- 1.5 Types and mixing
- 1.6 Patch testing
- 1.7 Hair partition and color application
- 1.8 Application and outcomes
- 1.9 Finishing and results

Unit 2: Hair Bleaching **6 hrs**

- 2.1 Introduction
- 2.2 Scalp and hair analysis
- 2.3 Safety and precautions
- 2.4 Basic knowledge
- 2.5 Mixing

2.6 Patch testing
2.7 Application and outcomes
2.8 Finishing and results

Unit 3: Hair lightening **6 hrs**

3.1 Introduction
3.2 Safety and precautions
3.3 Hair analysis
3.4 Lightening techniques
3.5 Special effects
3.6 Corrective coloring
3.7 Patch testing
3.8 Color care, nourishment and tips.
3.9 do's and don'ts

Unit 4: Hair highlighting / frosting **6 hrs**

4.1 Introduction
4.2 Safety and precautions
4.3 Difference between highlighting and low lighting.
4.4 Types of highlights
4.5 Tools and Equipment
4.6 Procedures
4.7 Necessity of hair highlighting.
4.8 Do's and don'ts

Unit 5: Low lighting **6 hrs**

5.1 Introduction
5.2 Safety and precautions
5.3 Difference between highlighting and low lighting.
5.4 Tools and Equipment
5.5 Procedures
5.6 Necessity of hair low lighting.
5.7 Do's and don'ts

PRACTICAL **60 hrs**

Unit 1: Hair coloring/dye techniques **20 hrs**

1.1 Introduction
1.2 Hair dye
- Powder based
- Cream based
- Gel based
- Shampoo based

1.3 Mixing and application
1.4 Patch test
1.5 Hair color
- Temporary color

- Semi permanent color
- Permanent color
- Fashion color

1.6 Tools and equipment
1.7 Safety and precautions
1.8 Patch test
1.9 Mixing
1.10 Hair partition
1.11 Application
1.12 Outcome/finishing
1.13 Hair care and treatment
1.14 Sanitize tools and equipment.

Unit 2: Hair Bleaching **10 hrs**

2.1 Introduction
2.2 Scalp and hair analysis
2.3 Safety and precautions
2.4 Basic color knowledge
2.5 mixing
2.6 Patch testing
2.7 Hair partition
2.8 Application
2.9 Finishing and results

Unit 3: Hair lightening **10 hrs**

3.1 Introduction
3.2 Client's choice
3.3 Patch test
3.4 Preparation
3.5 Partition
3.6 Procedures
3.7 Treatment and cure
3.8 Sanitize tools and equipments

Unit 4: Hair highlighting **10 hrs**

4.1 Introduction
4.2 Tools and equipment
4.3 Hair partition
4.4 Scalp protection
4.5 Wrapping techniques
- Cap wrapping
- Foil paper wrapping
- Cellophane paper wrapping

4.6 Safety and precautions
4.7 Nourishment and treatment

Unit 5: Hair low lighting **10 hrs**

5.1 Introduction
5.2 Chemicals and tools
5.3 Hair partition
5.4 mixing
5.5 Scalp protection
5.6 wrapping
5.7 Tips for taking care

References:

- Keshko Sondarya, Samasyara ra Samadhan – D.B.Gurung 2063BS
- ISBN 978-99946-2-180-4
- Pesawar Hair Styling and Designing,-Habib 2011-2012
- Hair Culture- B. Macfadden, Gemini Books-1994, ISBN-81-7439-003-0

Advance Hair Cutting and Styling

Year: 2nd **Part: II** **Semester: IV** **Program : Diploma in Beauty and Cosmetology**	**Total: 8 hrs/W (120 hrs)** **Theory: 2 hrs/W (30 hrs)** **Practical: 6 hrs/W (90 hrs)**

Course Description:
This course is designed to provide the students knowledge and skills of hair cutting in any style from a given picture and decide on the tools to get the best effects. This course will give them complete knowledge of the various methods and choices of Hair styles they can perform with confidence. This will guide them to analyze the hair according to the fashion trends, client wish and hair condition and can give them the best hair style.

Course Objectives:
After the completion of this course, the student will be able to:
8. Identify any hair cutting styles.
9. Perform any given hair styles.
10. Handle cutting tools, equipment and machine.
11. Analyze the effects of environment and life style, fashion trends to the client's hair types.

Course Contents

THEORY

Unit 1: Hair Cutting Methods with different tool

1.1 Cutting with the scissors 5 hrs

- Traditional
  - U Cut
  - V Cut
- Modern
  - Bob
  - Thai
  - Layered Cut
- Latest
  - Blunt cutting
  - Step cutting
  - Feather cutting
  - Split ends

1.2 Cutting with the razor 5 hrs

1) Traditional
   - Step cutting
2) Modern
   - Feather cutting
3) Latest
   - Slithering

1.3 Cutting with combination of scissor and razor 5 hrs

1) Traditional
   - long step cut
2) Modern
   - Short step cut
3) Latest
   - feather cuts

1.4 Cutting with combination of razor and electric clipper 5 hrs

1) Traditional
   - Boys cuts
2) Modern
   - Boys cuts
3) Latest
   - Eaton cuts

1.5 Combination of scissor and electric clipper. 5 hrs

1) Traditional
   - Boys cuts
2) Modern
   - Boys cuts
3) Latest
   - Eaton cuts

1.6 Working with Electric clipper 5 hrs

- Sculptured shaves
- Boys Cuts
- Very Short Hair Styles

PRACTICAL 90 hrs

Unit 1: Practice the use of cutting tools 20 hrs

1.1 Performthe art of choosing the proper hair style according to the clients' personality, lifestyle, hair texture, and preference.
1.2 Perform cutting using tools for the different styles.
1.3 Prepare the guideline for different styles.
1.4 Perform hair cutting following the guideline to get the proposed style.
1.5 Perform the cut for giving finesse to the style.

Unit 2: Perform Hair Cutting

2.1 With the scissors 10 hrs.

- Traditional
  - U Cut
  - V Cut
- Modern
  - Bob
  - Thai

- Layered Cut
- Latest
  - Blunt cutting
  - Step cutting
  - Feather cutting
  - Split ends

2.2 With the razor 10 hrs.

- Traditional
  - Step cutting
- Modern
  - Feather cutting
- Latest
  - Slithering

2.3 With combination of scissor and razor 10 hrs.

- Traditional
  - long step cut
- Modern
  - Short step cut
- Latest
  - feather cuts

2.4 With combination of razor and electric clipper 10 hrs.

- Traditional
  - Boys cuts
- Modern
  - Boys cuts
- Latest
  - Eaton cuts

2.5 Combination of scissor and electric clipper. 10 hrs.

- Traditional
  - Boys cuts
- Modern
  - Boys cuts
- Latest
  - Eaton cuts

Unit 3: Perform with Electric clipper 10 hrs

- Sculptured shaves
- Boys Cuts
- Very Short Hair Styles

Unit 4: Perform after hair cut service 10 hrs

- Perform hair drying and styling for short styles.
- Perform hair drying and styling for long styles.

Reference Books:

- The Van Dean Manual Professional training for beauticians.
- Haircutting Basics: An easy step by step guide to cutting hair the professional way- Martha G. Fernandez
- Haircutting Textbook-Certified Learning in Cosmetics

Hair and Scalp Treatment

Year: 2nd **Part: II** **Semester: IV** **Program : Diploma in Beauty and Cosmetology**	**Total: 6 hrs/W (90 hrs)** **Theory: 2 hrs/W (30 hrs)** **Practical: 4 hrs/W (60 hrs)**

Course Description:
This course is designed to provide knowledge and skill on hair and scalp treatment and various methods of doing it. The students will learn the fundamentals of how we can maintain a better hair and how to take care of it. They also study factors for better hair growth and healthy scalp.

Course Objectives:
After the completion of this course, the student will be able to:
1. Explain the ways to keep the hair and scalp healthy
2. Identify the different problems occurring on hair and scalp.
3. Describe the methods of treatmentsand application on hair and scalp.

Course Contents

THEORY

Unit 1: Hair **8 hrs**

1.1 Structure
1.2 Layers
1.3 Growth Cycles
1.4 Follicular Re-Genesise
1.5 Types
- According to external hair structure
- According to growth
- According to internal and genetic factors

1.6 Genetic factors
1.7 Density and other specific characteristics
1.8 Pigment Chemistry

Unit 2: Scalp Problems **4 hrs**

2.1 Hair Loss
2.2 Alopecia
2.3 Hair Fall
2.4 Dandruff
2.5 Cradle Cap
2.6 Itching and Scaling
2.7 Eczemas
2.8 Neuron dermatitis
2.9 Albinism (Vitiligo) with special reference to Scalp

Unit 3: Hair Problems **4 hrs**

3.1 Split Ends (Trichoptilosis)
3.2 Bubble Hair Syndrome
3.3 Hair Breakages (Fragilitas Crinium)
3.4 Folliculate Decal vans
3.5 Wooly Hair Syndrome
3.6 Trichorrhexis Nodosa (Nodulated Hair)
3.7 Albinism (Vitiligo) with special reference to hair

Unit 4: ScalpTreatment **4 hrs**

4.1 Clinical Protocol Lectures
4.2 Scalp Massage with Oil
4.3 Scalp Massage without Oil
4.4 Scalp Dry Cleaning
4.5 Scalp treatment with products (Cleanser, Ointments, and Serum)
4.6 Scalp treatment with tools and equipment (High Frequency, Infra Red Lamp etc)

Unit 5: Hair Treatment Process **4 hrs**

3.1 Clinical Protocol Lectures
3.2 Blow Dry
3.3 Shampooing and its techniques
3.4 Conditioning and its techniques
3.5 Hair and Head Massage (Traditional and Modern Methods)
3.6 Hair Spa Treatment(different Oils and Products)

Unit 6: Hair and Scalp Care **4 hrs**

6.1 Proper Nutrition for Hair Nourishment
6.2 Home Hair Care

Unit 7: Hair Processing **2 hrs**

7.1 Hair Blow Dry
7.2 Bleaching
7.3 Hair Coloring and Dying
7.4 Corn Rowing

PRACTICAL **60 hrs**

Unit 1: Scalp Oiling and Massage **14 hrs**

1.1 Perform Scalp Oiling :
- Traditional
- Modern

1.2 Perform Scalp Massage
- Traditional Massage
- Modern Therapeutic Massage

- Perform Massage for special cosmetically and medical conditions
- Perform Scalp and Root activating massage
- Perform hair drycleaning

Unit 2: Hair Oiling and Massage **12 hrs**

2.1 Perform hair Oiling :
- Traditional
- Modern

2.2 Perform Hair Massage
- Traditional Massage
- Modern Therapeutic Massage

2.3 Perform Massage for special cosmetically and medical conditions

2.4 Perform Hair activating massage

Unit 3: Scalp Treatments **14 hrs**

3.1 Perform Hair Loss Treatment
3.2 Perform Alopecia Treatment
3.3 Perform Dandruff Treatment
3.4 Perform Cradle Cap Treatment
3.5 Perform Itching and Scaling Treatment
3.6 Perform Eczemas Treatment

Unit 4: Hair Treatment **10 hr**

4.1 Perform Split Ends (Trichoptilosis) Treatment
4.2 Perform Bubble Hair Syndrome Treatment
4.3 Perform Hair Breakages (Fragilitas Crinium) Treatment
4.4 Perform Wooly Hair Syndrome Treatment
4.5 Perform Trichorrhexis Nodosa (Nodulated Hair) Treatment

Unit 5: Hair and Scalp Procedures **10 hrs**

5.1 Follow Clinical Protocol
5.2 Perform Blow Dry
5.3 Perform Shampooing and its techniques
5.4 Perform Conditioning and its techniques

5.5 Perform Bleaching.
5.6 Perform Straightening.
5.7 Perform Waving.
5.8 Perform Hair Relaxing
5.9 Perform Coloring.
5.10 Perform Scalp Dry Cleaning

Reference Books

- Hair and Scalp Diseases: Medical, Surgical, and cosmetic treatment (Basic and Cinical Dermatology)- Amy J.McMichael
- Keshko Sondarya, Samasyara ra Samadhan – D.B.Gurung 2063BS
- ISBN 978-99946-2-180-4
- Saundarya Pustika- Sipi Beauty Club (1997)
- Hair Culture- B. Macfadden, Gemini Books-1994, ISBN-81-7439-003-0

Common Skin, Hair and Nail Diseases

Year: 2nd **Part: II** **Semester: IV** **Program : Diploma in Beauty and Cosmetology**	**Total: 6 hrs/W (90 hrs)** **Theory: 4 hrs/W (60 hrs)** **Practical: 2 hrs/W (30 hrs)**

Course description:
This course is designed to provide knowledge and skill on various signs and symptoms of common skin, hair and nail disorders and diseases, their basic pathophysiology, preventions and treatment modalities if applicable.

Course Objective:
After the completion of this course student will be able to

1. Identify the common diseases of the skin hair and nail.
2. Explain the common disease and disorders of the skin, hair and nail.
3. Examine / manage the common disease and disorders of the skin, hair and nail.
4. Refer the clients with common disease and disorders of the skin, hair and nail.

Course content

Theory

Unit 1: Eruptions

1.1. **Eczema:** 10 hrs

Familiarize with basic principles of:

1.1.1 Eczema(Identification, presentation
1.1.2 Atopic eczema(Identification, clinical presentation,
1.1.3 Other forms of eczema(Identification, clinical presentation
1.1.4 Lichenoid eruptions(Identification, clinical presentation, Management and refer if required)
1.1.5 Papulosquamous eruptions(Identification, clinical presentation, differential diagnosis, Management)
1.1.6 Erythromderma(Identification, clinical presentation, Management and refer if required)
1.1.7 Photodermatology(Identification, clinical presentation, Management, and refer if required)

Unit 2: Infections

2.1 **Bacterial infections:** 2 hrs

Familiarize with basic principlesof Staphylococcal diseases:

2.2 **Viral infections:** 4 hrs

Familiarize with viral infections:

2.2.1. Warts and other viral infections
2.2.2. Herpes simplex and herpes zoster
2.2.3. HIV disease and immunodeficiency (Introduction)

2.3 **Fungal infections:** 4 hrs

Familiarize with fungal infections:

2.4 **Infestations (insect bites)** 4 hrs

Familiarize withinfestations:

2.4.1 Insect bite: Clinical presentation

2.4.2 Lice infestation (Pediculosis) : Clinical presentation

2.4.3 Scabies: Clinical presentation

2.5 **Tropical infections and infestations** 2 hrs

Familiarize with infection and infestations:

2.5.1 Leprosy: Introduction

Unit 3 Disorders of specific skin structures

3.1 **Sebaceous and sweat glands:** 4 hrs

Familiarize with sebaceous and sweet glands:

3.1.1 Acne

3.1.2 Rosacea

3.1.3 Others: Perioral dermatitis, Hyperhidrosis (Introduction)

3.2 **Disorders of the hair** 8 hrs

3.2.1. Hair Loss

3.2.1.1. Male pattern/ androgenetic alopecia: Introduction, management,Refer

3.2.1.2. Endocrine and nutrition related: Introduction, management, Refer

3.2.1.3. Telogen effluvium: Introduction, management, Refer

3.2.1.4. Localised: Introduction, management, Refer

3.2.1.5. Infectious “Trauma/ traction

3.2.1.6. Excess hair

3.2.1.7. Hirsuitism (Introduction, refer)

3.2.1.8. Hypertrichosis (Introduction,types, causes, management and refer)

3.2.1.9. Other common hair disorders

(Introduction, types, management and refer)

3.3 **Disorders of the nail** 4 hrs

3.3.1 Congenital disease: (Introduction, refer)

3.3.2 Trauma(Introduction, types, and refer)

3.3.3 Dermatoses: Introduction, types, refer)

3.3.4 Infections: Introduction, types, and refer)

3.2 Fracture of the nail 3 hrs

3.3 Nail splitting 3 hrs

3.4 Nail Discolouration 3 hrs

Unit 4: Pigmentation

4.1 **White patches** 4 hrs

Familiarize with

4.1.1. White patches of the skin leukoderma (Introduction, types, causes, clinical presentations and refer)

4.1.2. Others: Introduction, types, causes, clinical presentations, management and refer)

4.2 **Blemishes** 5 hrs

4.2.1. Introduction, types, various clinical presentations, management and refer)

4.2.2. Freckles and Lentigines*

4.2.3. Melasma *

4.2.4. Others.

Practical: 30 hrs

Group discussion, demonstration and viva

Identify the common dermatological disease from their signs and symptoms
Group discussion, demonstration, interviewing, examining of common bacterial, viral, fungal, infestations, acne, rosacea, problems regarding hair loss, excess hair and various disorders of the nail.

Unit 1: Eruptions

1.1. **Eczema:**

Unit 2: Infections

2.1 **Common Bacterial infections:**

2.2 **Common Viral infections:**

2.3 **Common Fungal infections:**

2.4 **Common insect bites**

Unit 3: Disorders of specific skin structures

3.1 **Sebaceous and sweat glands:**

3.2 **Disorders of the hair**

3.2.1 Identify and diagnose the various types of hair, nail and skin disorder and diseases

3.2.2 Guide or counsel the patient to use proper cosmetics or product

3.2.3 Perform primary care, guide or counsel the patient about the illness

3.2.4 Refer for further treatment

3.3 **Disorders of the nail**

Unit 4: Pigmentation*

4.1 **White patches**

4.2 **Belmishes**

Reference Books:

- Dermatology 3rd Edition, Jean L.Bolognia, Joseph L.Jorizzo, Julie V.Schaffer
- Fitzpatrik's Dermatology in General Medicine, 7th Edition,Klaus Wolff, Lowella A.Goldsmith, Stephen I.Katz, Barbarra A.Gilchrest, Amy S.Paller, David J.Leffell
- Fitzpatric colour atlas and synopsis of clinical dermatology 6th Edition, Klauss Wolff, Richard Allen Johnson
- Dermatology An illustrated colour text, 2nd Edition Churchill Livingstone, David J. Gawkrodger
- Fungal infection Diagnosis and management, Malcom D.Richardson & david W.Warnock

Year: III

Semester: I

Subjects:

1. **Salon Management and Business**
2. **Advance Makeup**
3. **Entrepreneurship Development**
4. **Spa and Wellness Therapy**
5. **Hair and Chemical II**
6. **Facial Treatment II**
7. **Assemble Cosmetology**

Salon Management and Business

Year: 3rd **Part: I** **Semester: V** **Program : Diploma in Beauty and Cosmetology**	**Total: 4 hrs/W (60 hrs)** **Theory: 4 hrs/W (60 hrs)** **Practical: 0 hrs/W (0 hrs)**

Course Description:

This course is designed to provide students the fundamental knowledge and skills on opening, operating and management of Business of Beauty Salon. This also includes supervisory functions such as planning, organizing, coordinating, and controlling. The students will be provided with the Salon Hospitality and Professional Ethics.

Course Objectives:

After the completion of this course, the student will be able to:

1. Manage the Beauty and Wellness Center
2. Handle any situation with clients and work team members
3. Describe the system of Beauty Salon
4. Host the hospitality services with good etiquette.

Course Contents

Unit 1: Salon Business **20 hrs**

1.1 Introduction to Salon

1.2 Types of Salon

1.3 Market analysis and research

1.4 Salon Operations

- Ownership,
- Partnership,
- Franchises

1.5 Sales and Services

1.6 Advertising

Unit 2: The Salon Management **20 hrs**

2.1 Time Management
2.2 Communication
2.3 Team Work
2.4 Appointments and clients records
2.5 Preparing and organizing Workstations
2.6 Revenue and Expenses

Unit 3: Hospitality and Ethics **16 hr**

3.1 Introduction
3.2 Clients Relationship
3.3 Professional Attitude
3.4 Professional Ethics

Unit 4: Public Awareness **4 hrs**

4.1 Skin Hair and Nail Care for
4.2 Products awareness

Reference Books:

1) Excellence in Management by Parkinson-Rustam ji, Vijan Books, India, 2004
2) Milady's Standard, Textbook of Cosmetology- Revised, Milady Publishing Company-2010
3) Beauty Therapy, The Foundations , Lorraine Nordmann, THOMSON 2004

Advanced Make-Up

Year: 3rd **Part: I** **Semester: V** **Program : Diploma in Beauty and Cosmetology**	**Total: 8 hrs/W (120 hrs)** **Theory: 2 hrs/W (30 hrs)** **Practical: 6 hrs/W (90 hrs)**

Course Description:

This course is designed to provide the students fundamental knowledge and skills on advanced make-up application. This includes knowledge on tools, equipments, cosmetics products, safety, etc.

Course Objectives:

On completion of this course, the trainees/ students will be able to:-

1. Familiarize with advanced make-up tools and equipment.
2. Application of corrective make-up using optical illusions
3. Application of false eye-lashes
4. Perform eyebrow and lash tinting
5. Determine facial balance
6. Familiarize with facial harmony.
7. Follow Health and safety standards
8. Apply make-up cosmetics.

Course Contents

Unit 1: Advanced make up **8 hrs**

1.1 Introduction
1.2 Purpose
1.3 Determination of facial balance
- Horizontal Section
- Vertical Section

1.4 Standards facial harmony
- Distance between eyes
- The eyebrows
- The face

Unit 2: Corrective make-up using optical illusion 10 hrs

2.1 Introduction
2.2 Advantages
2.3 Correction and tips according to shape

2.3.1 Corrective eye make-up

- Deep set eyes
- Prominent eyes
- Small eyes
- Close set eyes

2.3.2 Corrective nose make-up

- Wide nose
- Thin nose

2.3.3 Corrective cheek, jaw and chin makeup

- Larger cheekbones
  - Hollows cheeks
  - Large, heavy jaw
  - Very narrow jaws
- Corrective lip make-ups
- Thin Lips
- Thick Lips

2.3.4 Corrective make- up facial shapes

- Oval
- Square
- Round
- Triangle
- Diamond
- Heart
- Oblong

2.3.5 Corrective chin make-up

- Double chin
- Receding chin

2.3.6 Corrective Forehead makeup

- Broad
- Narrow

2.3.7 Corrective neck make-up

- Thick and Thin
- Long and short

Unit 3: False eye lashes 2 hrs

3.1 Introduction
3.2 Advantages
3.3 Types
    3.3.1 Strip eye-lashes
    3.3.2 Individual eye- lashes
3.4 Procedure
3.5 Safety Tips
3.6 Removing strip eyelashes

Unit 4: Eyebrow and lash tinting **2 hrs**

4.1 Introduction
4.2 Advantages
4.3 Materials
4.4 Procedure
4.5. Safety Tips

Unit 5: Permanent make up **4 hrs**

5.1 Introduction
5.2 Advantages
5.3 Materials
5.4 Procedure

Unit 6: Airbrush make up **4 hrs**

6.1 Introduction
6.2 Advantages
6.3 Materials
6.4 Procedure

Practical

Perform the following skills: 30 hrs

1. Perform corrective make- up using optical illusion for:
    - Deep set eyes
    - Prominent eyes
    - Small eyes
    - Wide nose
    - Double chin
    - Prominent lips
    - Chubby cheek
    - Hollow cheek
    - Large/heavy jaw
    - Round face
    - Square face
    - Oblong face

2. Apply false lashes 10 hrs
3. Apply eyebrow and eyelash tinting 10 hrs
4. Perform bridal make up using optical illusion 10 hrs

Reference book:

1. The Ultimate Beauty Book (Sally Norton, Kate Shapland, Jacki Wadeson) 1996, London

Entrepreneurship Development

Year: 3rd **Part: I** **Semester: V** **Program : Diploma in Beauty and Cosmetology**	**Total: 5 hrs/W (75 hrs)** **Theory: 3 hrs/W (45 hrs)** **Practical: 2 hrs/W (30 hrs)**

Course Description

This course is designed to provide the knowledge and skills on formulating business plan and managing small business. The entire course deals with assessing, acquiring, and developing entrepreneurial attitude; skills and tools that are necessary to start and run small enterprises.

Course Objectives

After completion of this course students will be able to:

1. Define business and entrepreneurship.
2. Explore entrepreneurial competencies.
3. Analyze business ideas and viability.
4. Formulate business plan with its integral components
5. Manage small business

Course Contents

THEORY

Unit 1: Introduction to business & entrepreneurship (9 hours)

1. Overview of entrepreneur and entrepreneurship
2. Wage employment , self- employment and business
3. Synopsis of types and forms of enterprises
4. Attitudes, characteristics & skills required to be an entrepreneur
5. Myths about entrepreneurs
6. Overview of MSMEs (Micro, Small and Medium Enterprises) in Nepal

Unit 2: Exploring and developing entrepreneurial competencies (10 hours)

1. Assessing individual entrepreneurial inclination
2. Assessment of decision making attitudes
3. Risk taking behavior and risk minimization
4. Creativity and innovation in business
5. Enterprise management competencies

Unit 3: Business identification and selection (4 hours)

1. Sources and method of finding business idea(s)
2. Selection of viable business ideas

3. Legal provisions for MSMEs in Nepal

Unit 4: Business plan formulation **(17 hours)**

1. Needs and importance of business plan
2. Marketing plan
    - Description of product or service
    - Targeted market and customers
    - Location of business establishment
    - Estimation of market demand
    - Competitors analysis
    - Estimation of market share
    - Measures for business promotion
3. Business operation plan
    - Process of product or service creation
    - Required fix assets
    - Level of capacity utilization
    - Depreciation & amortization
    - Estimation office overhead and utilities
4. Organizational and human resource plan
    - Legal status of business
    - Management structure
    - Required human resource and cost
    - Roles and responsibility of staff
5. Financial plan
    - Working capital estimation
    - Pre-operating expenses
    - Source of investment and financial costs
    - Per unit cost of service or product
    - Unit price and profit/loss estimation of first year
6. Business plan appraisal
    - Return on investment
    - Breakeven analysis
    - Risk factors

Unit 5: Small business management **(5 hours)**

1. Concept of small business management
2. Market and marketing mix

3. Basic account keeping

PRACTICAL

Unit 1: Overview of business & entrepreneurship (2 hours)

1. Collect business information through interaction with successful entrepreneur

Unit 2: Exploring and developing entrepreneurial competencies (2 hours)

1. Generate innovative business ideas

Unit 3: Product or service identification and selection (2 hours)

1. Analyze business ideas using SWOT method

Unit 4: Business plan formulation (20 hours)

1. Prepare marketing plan
2. Prepare operation plan
3. Prepare organizational and human resource plan
4. Prepare financial plan
5. Appraise business plan
6. Prepare action plan for business startup

Unit 5: Small business management (4 hours)

1. Prepare receipt and payment account
2. Perform costing and pricing of product and service

Text book:

क) प्रशिक्षकहरुका लागि निर्मित निर्देशिका तथा प्रशिक्षण सामग्री, प्राविधिक शिक्षा तथा व्यावसायिक तालीम परिषद्), २०६९

ख) प्रशिक्षार्थीहरुका लागि निर्मित पाठ्यसामग्री तथा कार्यपुस्तिका, प्राविधिक शिक्षा तथा व्यावसायिक तालीम परिषद् (अप्रकाशित), २०६९

Reference book:

Entrepreneur's Handbook, Technonet Asia, 1981.

Spa and Wellness Therapy

Year: 3rd **Part: I** **Semester: V** **Program : Diploma in Beauty and Cosmetology**	**Total: 6 hrs/W (90 hrs)** **Theory: 2 hrs/W (30 hrs)** **Practical: 4 hrs/W (60 hrs)**

Course Description:

This course is designed to provide students the basic knowledge, concepts and skills about spa operations and massage therapies, equipment and their procedures.It focuses on familiarizing students with different spa operations, their esthetic modalities and treatments, different massage therapies and their practical uses.

Course Objectives:

After the completion of this course students will be enabled to:

1. Familiarize with spa and massage therapy.
2. Perform Spa Treatments and Massage Therapies.
3. Handle tools and equipment for wellness.
4. Perform management and safety issues during a spa.

Course Contents

Theory

Unit 1: Spa 6 hrs

1.1 Introduction
1.2 History
1.3 Types of Spa
- Ayurvedic
- Destination
- Marine
- Warm Water (Tatopani)
- Therapeutic

1.4 Spa Equipment and supplies
1.5 Advantages of spa

Unit 2: Spa Therapy **6 hrs**

2.1 Hydro
2.3 Thalassic
2.4 Herbal
2.5 Mud
2.5 Hot Stone
2.6 Aroma

Unit 3: Massages **18 hrs**

3.1 Orthopedic
3.2 Ayurvedic
3.3 Vertebral
3.4 Head and Shoulder
3.5 Trekker's/Traveler's
3.5 Deep Tissue
3.7 Lymphatic
3.8 Acupressure
3.8 Foot reflexology
3.6 Swedish
3.7 Thai
3.8 Shiatsu
3.9 Pregnancy
3.10 Four hands

Practical

1. Handle Different Spa Equipment 5 hrs
2. Perform Sanitation and Sterilization 5 hrs
3. Perform the following massages: 45 hrs
    a. Hydrotherapy
    b. Exfoliation
    c. Thalassic therapy
    d. Herbal bath therapy, Salt scrubs and Mud Wraps
    e. Hot Stone therapy
    f. Aromatherapy
    g. Orthopedic Massage
    h. Deep Tissue Massage
    i. Ayurvedic Massage (Especially, Shirodhara
    j. Vertebral Massage(katibasti)
    k. Head and Shoulder Massage
    l. Foot reflexology
    m. Lymphatic Massage
    n. Acupressure
    o. Trekker's/Travellers' Massage
    p. Swedish / Relaxation Massage
    q. Thai Massage
    r. Shiatsu Massage
    s. Pregnancy Massage
    t. Four hands Massage

4. Perform Spa Worker fatigue Exercise and meditation
   (for the staffs as stress relief, few exercises) 5 hrs

Reference Books:

1."*The Complete Spa Book for Massage Therapists*" by Steve Capellini.
2. The Art and Science of Spa and Body Therapy by Jane Foulston

Hair and Chemicals- II

Year: 3rd **Part: I** **Semester: V** **Program : Diploma in Beauty and Cosmetology**	**Total: 6 hrs/W (90 hrs)** **Theory: 2 hrs/W (30 hrs)** **Practical: 4 hrs/W (60 hrs)**

Course Description:

This course is designed to provide students the knowledge and skills of chemicals used in hair. It emphasizes on the modification of natural hair state and shape by utilizing various application methods while using a hair shaping chemical product that chemically treats the hair. It also includes relaxation techniques for the hair, head and scalp. The courses will guide you in areas like chemical applications to achieve a certain desired shape and texture of natural hair. You, at the end of this course, will also have the ability to perform hair shaping using chemical applications and create desired shaped and texture of a clients hair using the techniques or any other advanced chemical application and hair modification methods.

Course Objectives:

After the completion of this course, the student will be able to:

1. Familiarize with hair chemicals and their application.
2. Familiarize with basic terms used
3. Differentiate hair types.
4. Perform hair waving and relaxing.
5. Handle clients and analyzing the requirements.
6. Identify chemical effects on hair.
7. Be thorough with the “do’s and don’ts” in this line of work.

COURSE CONTENTS

THEORY

Unit 1: Hair Waving **10 hrs**

1.1 Introduction
1.2 Tools and equipments
1.3 Chemistry of permanent waving
1.4 Structure of hair
1.5 Scalp and hair analysis
1.6 Wrapping and winding techniques
1.7 Principal actions of hair waving
1.8 Effects of chemicals
1.9 Effects of bonds

1.10 Do’s and don’ts
1.11 Safety and precautions

Unit 2: Waving techniques **10 hrs**

2.1 Hair sectioning and blocking
2.2 Selections of rollers
2.3 Winding and wrapping
- Spiralwaving
- Croquignole waving
- Combination
- Pre heat waving (electrical wire)
- Regularwaving
- Body waving

2.4 Pre test curls
2.5 Neutralization
2.6 Finishing
2.7 Treatment and care
2.8 Safety and precautions

Unit 3: Hair Relaxing/straightening **10 hrs**

3.1 Introduction
3.2 Tools and equipments
3.3 Structure of hair or hair analysis
3.4 Mixing
3.5 Application
3.6 Neutralization
3.7 Finishing
3.8 Treatment and tips
3.9 Do’s and don’ts
3.10 Safety and precautions

PRACTICAL

Unit 1: Perform Hair Waving **50 hrs** 1.1
Perform Rollers Applications

- Single holo
- Double holo
- Straight back
- Dropped crown

1.2 PerformWrapping
- Book end paper
- Single end paper

- Double end paper

1.3 Perform the Process of the following:

- Spiral waving
- Croquignole waving
- Combination
- Pre heat waving (electrical wire)
- Regular waving
- Body waving

1.4 Perform Test curl 10 hrs

References:

1. Keshko Sondarya, Samasyara ra Samadhan – D.B.Gurung 2063BS
2. ISBN 978-99946-2-180-4
3. Pesawar Hair Styling and Designing,-Habib 2011-2012
4. Hair Culture- B. Macfadden, Gemini Books-1994, ISBN-81-7439-003-0

Facial Treatment II

Year: 3rd **Part: I** **Semester: V** **Program : Diploma in Beauty and Cosmetology**	**Total: 6 hrs/W (90 hrs)** **Theory: 2 hrs/W (30 hrs)** **Practical: 4 hrs/W (60 hrs)**

Course Description:

This course is designed to provide the students fundamental knowledge and skills on management of skin which includes supervisory functions such as the proper products & Ingredients to use for skin conditions, treatment facials according to skin types.

Course Objectives:

After the completion of this course, the student will be able to:

1. Analyze the Skin types.
2. Identify the skin problems.
3. Perform Lymphatic vessle system.
4. Handle facial tools and equipments.

Course Contents

THEORY 30 hrs

Unit 1: Pre- Mature Skin **5 hrs**

1.1 Introduction

1.2 Prevention and care

1.3 Treatment and management

Unit 2: Fine lines & Wrinkles **5 hrs**

2.1 Fine Lines
2.2 Wrinkles
2.3 Prevention and care
2.4 Treatment and management

Unit 3: Pimple **5 hrs**

3.1 Pimple & its types

3.2 Prevention and care

3.3 Treatment and management

Unit 4: Pigmentation 5 **hrs**

4.1 Introduction

4.2 Types

- ❖ Hypo-Pigmentation
- ❖ Hyper-Pigmentation

4.3 Prevention and care

4.4 Treatment and management

Unit 5: Hydrated and Dehydrated Skin **5 hrs**

5.1 Introduction

5.2 Hydrated Skin

5.3 Dehydrated skin

5.4 Prevention and care

5.5 Treatment and management

Unit 6: Indications and Contraindications **3 hrs**

6.1 Introduction

6.2 Ways of using facial Gadgets.

Unit 7: Lymph & Lymphatic Drainage **2 hrs**

7.1 Introduction

7.2 Advantages

PRACTICAL **60 hrs**

Unit 1: Fine lines & wrinkles **15 hrs**

1.1. Perform wrinkle Facial treatment by using:

- Traditional Mask
- Paraffin Mask
- Mud mask
- Rubber mask
- Thermo herb mask

Unit 2: Pimple 10 **hrs**

2.1. Perform pimple treatment

- Papule
- Pustule- papule

2.2. Perform Acne Treatment

Unit 3: Hyper Pigmentation 5**hrs**

3.1. Perform Microdermabrasion

3.2. Perform Ampoules Treatment

Unit4: Pre- Mature Skin 10 **hrs**

4.1. Perform Pre- Mature Skin Treatment

Unit 5: Dehydrated Skin 10 **hrs**

5.1. Performfacial on hydrated skin.

5.2. Perform facial on dehydrated facial.

Unit 6: Contraindication Facial **10 hrs**

6.1. Perform Contraindication for facials.

6.2. Perform Lymphatic press points.

6.3. Perform proper way of using facial Gadgets.

Reference:

- -ISBN 978-90-70502-32-4 A Leerboek Schoonheidseverzorging DOEN Ms. Janny Berends Beeuwkes from The Netherlands

Assemble Cosmetology

Year: 3rd **Part: I** **Semester: V** **Program : Diploma in Beauty and Cosmetology**	**Total: 3 hrs/W (45 hrs)** **Theory: 2 hrs/W (30 hrs)** **Practical: 1 hrs/W (15 hrs)**

Course Description:

This course is designed to provide students the process during the assembling and pre-production plan of cosmetics. Students will understand the different formula uses during the formulation of the cosmetics uses for different parts of the body. They will get the knowledge of Physical Chemistry of cosmetics including the tools, equipment and machine used during the production plan of the cosmetics. They will understand the filling, labeling and packaging methods of finish goods.

Cours Objectives:

After completion of this course the students will be enabled to:

1. Explain the physical and cosmetic chemistry applied in processing and development of cosmetic product for hair, skin and makeup.
2. Make a chart of formulas used in the formulation of different cosmetics.
3. Explain diagrammatically the process of different cosmetic production stages.
4. Analyze the tools, equipment and machine used during the production of cosmetics.
5. Explain techniques of micro and macro analysis of ready goods.

Course Contents

Theory

Unit 1: Introduction **2 hrs**

1.1 Introduction

1.2 Importance

Unit 2: Sanitation& Sterilization during production procedures **6 hrs**

2.1 Ingredients
2.2 Tools
2.3 Equipment
2.4 Inroduction room

Unit 3. Physical and Cosmetic Chemistry **12 hrs**

3.1 Organic Chemistry

3.2 Inorganic Chemistry

3.3 Matter

3.4 Forms of matter

3.5 Properties of matter

3.6 Chemistry of Water

3.7 Chemistry of Hair Products

I. Shampoo
II. Conditioners
III. Waving lotion
IV. Straightening
V. Hair Color

3.8 Chemistry of Skin Products

3.9 Chemistry of Nail Products

3.10 Chemistry of preservatives

Unit 4. Cosmetic Formulation **4 hrs**

4.1 Classifications of Ingredients

4.2 Formulation formula

4.3 Mixing Method

Unit 5 Production tools, equipment and machines **5 hrs**

5.1. Classify and using method of production tools

5.2. Classify and using method of production equipment

5.3. Classify and using method of production machine

Unit 6 Process and procedures **4hrs**

Unit 7. Macro and Micro analysis **6 hrs**

7.1. Macro Analysis

- Viscosity
- Thickness
- Mixed Consistency
- Finishing

7.2 Micro Analysis

- Solubility
- Microbes analysis for validity of products

Unit8. Finishing, packaging and Labeling Goods **6 hrs**

8.1 Identify and separation of finishing goods

8.2 Labeling the finish goods

8.3 Packaging the Labeled goods in concern boxes.

Practical **15 hrs**

Unit 1: Categories of the cosmetic ingredients

Unit 2: Preprocess Cosmetic production procedure

Unit 3: Identify tools, equipment and machines

Unit 4: Enlist Cosmetic Production procedures

Unit 5: Enlist Analytical analysis of finish goods

Unit 6: Prepare Filling, Labeling and Packaging

Reference Books:

1. John W Dalton- The Professional Cosmetologists (third edition)
2. Kathryn Klingee- First Book of Beauty (Publisher: Simon and Sehuster, America)
3. Linda Sonntag- The Hair Style, Hair Care and Beauty Book (Publisher: Tiger books international, London)
4. Ann Gallant – Principles and Techniques for the Beauty Specialist (Publisher: Stanley Thornes Published Ltd. England)
5. Felicity Clark- Vogue Guide to Hair Care (Publisher: Penguin Books, USA)
6. Dr. Neena Khanna- Department of skin, body and beauty care (Publisher: Delhi Pustak Mahal)
7. Rashmi Sharma- Herbal Beauty Care Publisher: Delhi Pustak Mahal)
8. Essentials of medical pharmacology 5thEdition, K.D.Tripathi
9. Procedures in cosmetic dermatology, COSMECEUTICALS, Zoe Diana Draelos
10. Dermatological and transdermal formulations, Drug and pharmaceutical science, A series of textbook and monographs, Kenneth A Walters, ©Marcel Dekker

Year: III
Semester: VI

Subjects: Work Experience Practice

Work Experience Practice (WEP)

21 weeks * 40 hours per week = 840 hrs

Description

After completing the final exam of fifth semester, students will be placed in beauty salonsand other appropriate organization for Work experience practice for 5 months (21 weeks). Students will work in any one or all types of enterprise such as beauty cosmetics centres, salons, spa and aesthetics based and service based enterprises during the Work experience practice. Related training institution will select the institutes/organization for Work experience practice and make agreement with them. Related training institute will assign the students in different organization for 21 weeks. Students are not allowed to work in their own salon/organization.

During the Work experience practice period student perform the following tasks;

1. Apply knowledge and skills learned in the institution in actual work settings or conditions and develop practical experience before graduating.
2. Acquire deeper knowledge of the industry in which the Work experience practice is done.
3. Work effectively with professional colleagues and experience their activities and functions.
4. Develop specific, vocational and personal disciplines, skills and attitudes which can be best learnt on the job.
5. Strengthen portfolio or resume with practical experience and projects.
6. Gain experience that could even lead to entry level job opportunities within the company.
7. Develop a greater understanding on career options thatdefine personal career goals.
8. Increase level of maturity and develop work culture.
9. Establish professional contacts and network.
10. Identify areas for future knowledge and skill development.

REQUIREMENTS FOR SUCCESSFUL COMPLETION OF THE WORK EXPERIENCE PRACTICE:

- Satisfactory completion of **21 weeks (21*40 =850hrs)** of the Work experience practice in an approved organization as attested by the concerned official of the organization.
- Preparation and submission of a draft of Work experience practice Report within 2 weeks of completion of the Work experience practice.
- Approval letter of the submitted draft of the Work experience practice Report by the College's Work experience practice Supervisor.
- Submission of the final Work experience practice Report and presentation and viva - voce on the Work experience practice Report.
- At least 50 % marks should be secured out of 100.

WORK EXPERIENCE PRACTICE EVALUATION:

The total marks awarded for the Work experience practice (WEP) will be 500 and evaluation will be done by:

Evaluator	Marks
WEP Supervisor	300
College's Work experience practice Coordinator	100
External Evaluator (CTEVT)	100
Total	**500**

The presentation and viva voce may also be evaluated by multiple internal and external evaluators (CTEVT).

Working areas and duration for WEP

Face: 7 weeks
Makeup, Facial, Eyebrow

Body: 7 weeks
Manicure, Pedicure, Spa, Nail, Waxing

Hair and Scalp: 7 weeks
Cutting, Styling, Chemical, Coloring, Treatment

WEP Institution should have;

Sufficient tools, equipment, materials and spaces
Certified/Experience supervisor
Registered Salon

Content Experts

1. Dr. Rajyashree shrestha, Professor, Padma Kanya Campus, Expert beautician.
2. Nanu Rajbhandari, Sr. BeauticianMD, Nirama Beauty Home, Teku Kathmandu.
3. Binu Shrestha, Beautician, Binu's Cindrella, Teku Kathmandu.
4. Sajina shilakar, Beauty Therapist, Bliss beauty home, Pulchock, Lalitpur
5. Shrijana Pradhan, Sipi beauty Club, Bishal Nagar, Kathmandu
6. DB Gurung, Beauty Therapist, Kupondol Lalitpur.
7. Bimala Rijal, Cosmetologist, Hattiban, Lalitpur.
8. Sushila Ghimire, Uniherbal Beauty Parlour and Training Center, baneswor Kathmandu.
9. Sita Aryal, Beautician,Monalisha beauty Parlour kupondol Lalitpur
10. Dr. Anil Kumar Jha, GM, Dermatologist DISSARC Maharajgunj.
11. Dr. Subeksha Karki Dermatologist DISSARC Maharajgunj.
12. Dr Siree Thapa, Dermatologist DISSARC Maharajgunj.
13. Dr Padma Tuladhar, Dermatologist DISSARC Maharajgunj.
14. Hari Sharan Adhikari Expert, chemistry, WRC, Pokhara
15. Mahesh Adhikari Expert, Physics, Yati health science collage Kathmandu
16. K K Jha, Expert, Math, BSET, Balaju Kathmandu.
17. Sagarmani Lamashal

Process Experts

Depak Prasad Poudel, Director, Curriculum Development Division, CTEVT
Sharada Adhikari, Senior Curriculum Officer, CTEVT
Ishwar Chandra Ghimire, Curriculum Officer, CTEVT

Thank you