PUNJAB BOARD OF TECHNICAL EDUCATION

21-A, Kashmir Block Allama Iqbal Town, Lahore

www.pbte.edu.pk- R&D Section Tel # 042-99260273

SAY NO TO CORRUPTION

No: PBTE/R&D/2025/625 Dated:- 26-08-25

NOTIFICATION

In pursuance of NAVTTC Notification No. DG(SS&C)/DAE/2024 dated 25-07-2025, it is notified that newly developed curricula of **"DAE E-Commerce Technology (03 years)"** and **"DAE Textile Technology with Specialization in Wool (03 years)"** have been approved by National Vocational & Technical Training Commission (NAVTTC) for its implementation in all institutes affiliated with PBTE.

The implementation of above said technologies shall apply on the students who shall be registered from Academic Session 2025-26 and onward. Punjab Board of Technical Education, Lahore shall conduct the examinations of the said technologies w.e.f. 1st Annual Examination 2026 and onwards accordingly. Soft copy of the curricula of the aforesaid technology may be downloaded from the website of PBTE i.e. http://www.pbte.edu.pk/Ptextbooks.aspx

SECRETARY

CC To.

1- PA to Chairperson, PBTE, Lahore.
2- PA to DG, PSDA, Lahore.
3- PA to DG Academics, TEVTA, Lahore.
4- PA to DG Operations, TEVTA, Lahore.
5- PA to Secretary, PBTE, Lahore.
6- PA to Controller of Examinations, PBTE, Lahore.
7- The Principals concerned.
8- Deputy Controller of Examinations (Conduct), PBTE, Lahore.
9- Deputy Controller of Examinations (Secrecy), PBTE, Lahore.
10- System Analyst, PBTE, Lahore.
11- Assistant Controller of Examinations (Technical), PBTE, Lahore.
12- Assistant Controller of Examinations (Conduct), PBTE, Lahore.
13- Assistant Controller of Examinations (Secrecy), PBTE, Lahore.
14- Assistant Controller of Examinations (P&P-I), PBTE, Lahore.
15- Assistant Controller of Examinations (P&P- II), PBTE, Lahore.
16- Assistant Secretary (Recognition), PBTE, Lahore.
17- IPS, PBTE, Lahore.
18- IOW, PBTE, Lahore.
19- Web Administrator, PBTE Lahore to upload on Board Website.

CURRICULUM
FOR
DIPLOMA OF ASSOCIATE ENGINEER
IN
E-COMMERCE

(3- Year Course)
Developed- 2025
under Digital alliance Collaboration with ITMC,
P.R-CHINA

CURRICULUM SALIENT

Qualification Title	3-Year Diploma of Associate Engineer (D.A.E.) in E-commerce
Duration of Course	3 Years（Annual System）
Total Training Credit Hours	70
Entry Level	Entry Level Matric with Sc.
Theory/ Pract. / ratio	39% Theory ； 61 %Practical
Instructional Medium	Urdu / English

Scheme of Studies D.A.E. E-commerce, Developed 2025

(***Under Digital Alliance Collaboration with ITMC, China***

FIRST YEAR						
Subject Code		**Subjects**	**Total Hrs**	**T**	**P**	**C**
Gen	111	Islamiat and Pak Studies	32	1	0	1
TTQ /Civic-111		Tarjumatul Quran (Quran Translation / Civics)	32	1	0	1
Eng	112	English	64	2	0	2
Math	113	Applied Mathematics	96	3	0	3
Phy	132	Applied Physics	128	1	3	2
Ch	112	Applied Chemistry	128	1	3	2
Comp	102	Computer Applications	128	1	3	2
EC	113	E-commerce Fundamentals	160	2	3	3
EC	123	Retail Fundamentals	160	2	3	3
EC	132	Data Collection and Processing	128	1	3	2
EC	143	Product Photography and Material Editing	224	1	6	3
Total			**1280**	**16**	**24**	**24**

SECOND YEAR						
Subject Code		**Subjects**	**Total Hrs**	**T**	**P**	**C**
Gen	201	Islamiat and Pak Studies	32	1	0	1
TTQ /Civic-211		Tarjumatul Quran (Quran Translation / Civics	32	1	0	1
Math	212	Applied Mathematics-II	64	2	0	2
EC	212	E-commerce Law and Regulations	64	2	0	2
EC	222	Data Visualization	128	1	3	2
EC	232	Data Analysis Techniques	128	1	3	2
EC	243	Online Store Operations	160	2	3	3
EC	253	Visual Marketing Design	160	2	3	3
EC	263	Internet Marketing	160	2	3	3
EC	273	Internet Product Development	160	2	3	3
EC	283	O2O Retail Store Operations	160	2	3	3
Total			**1248**	**18**	**21**	**25**

THIRD YEAR						
Subject Code		**Subjects**	**Total Hrs**	**T**	**P**	**C**
Gen	301	Islamiat and Pak Studies	32	1	0	1
EC	313	Data-Driven Operations	160	2	3	3
EC	322	Community Operations	128	1	3	2
EC	333	Internet Promotion	160	2	3	3
EC	343	New Media Marketing	160	2	3	3
EC	352	Live Streaming Sales	128	1	3	2
EC	363	Customer Service and Management	160	2	3	3
EC	372	Supply Chain Management	128	1	3	2
EC	382	Comprehensive Practice in E-commerce Operations	192	0	6	2
Total			**1248**	**12**	**27**	**21**

Gen-101 ISLAMIAT AND PAK STUDIES

اسلامیات/مطالعہ پاکستان

حصہ اول اسلامیات	GEN III	ٹی پی سی
حصہ دوم مطالعہ پاکستان		1 0 1
موضوعات حصہ اول اسلامیات	سال اول	کل وقت: 20 گھنٹے

کتاب و سنت

(ا) قرآن مجید

-1 تعارف قرآن مجید 2- نزول قرآن 3- مکی و مدنی سورتوں کی خصوصیات 4- وحی کی اقسام 5- پندرہ منتخب آیات مع ترجمہ

1.1 تنالو البر حتی تنفقوا مما تحبون

1.2 واعتصموا بحبل اللّٰہ جمیعا" ولا تفرقو

1.3 ولا یجرمنکم شنان قوم علی ان لا تعدلوا

1.4 ان اللّٰہ یامرکم ان تودوا الامانات الی اھلھا

1.5 ان اللّٰہ یامر بالعدل والاحسان

1.6 ان الصلوتہ تنھی عن الفحشاء وامنکر

1.7 لقد کان لکم فی رسول اللّٰہ سوۃ حسنتہ

1.8 ان اکرمکم عند اللّٰہ اتقاکم

1.9 وما آتاکم الرسول فخرزو ومانھی عنھوانتھوا

1.10 ولوفو بالعھد

1.11 وماشروھن بالمعروف

1.12 یمحق اللّٰہ الربوویر بی الصمدقات

1.13 واصبر علی ما اصابک

1.14 وقولو قولا سدیدا

1.15 ان الدین عند اللّٰہ السلام

(ب) سنت

-1 سنت کی اہمیت

-2 دس منتخب احادیث مع ترجمہ و تشریح

1- انما الاعمال بالنیات

2- انما بعثت لاتمم مکارم الاخلاق

3- لا یومن احدکم حتی یحب لاخیہ ما یحب لنفسہ

4- المسلم من سلم المسلمون من لسانہ ویدہ

5- قل امنت باللہ ثم استقم

6- خیرکم خیرکم لاہلہ

7- سباب المسلم فسوق وقتالہ کفر

8- المومن اخو المومن

9- کل المسلم علی المسلم حرام بمعہ وما لہ وعرضہ

10- ایتہ المنافق ثلاث اذا حدیث کذب واذا وعد اخلف واذا اوتمن خان

دین اسلام

2.1 اسلام کے بنیادی مقاصد کی وضاحت اور انسان کی انفرادی و اجتماعی زندگی پر ان کے اثرات

1- توحید

2- رسالت

3- آخرت

4- ملائکہ

5- آسمانی کتب

2.2 عبادات

1- نماز 2- روزہ 3- حج 4- زکوٰۃ

مندرجہ بالا عبادات کی اہمیت و فضیلت، حکمتیں اور انسان کی انفرادی و معاشرتی زندگی پر اس کے اثرات

حصہ اول

حصہ اسلامیات

تدریسی مقاصد

۱۔ قرآن مجید

عمومی مقصد: طالب علم یہ سمجھنے کے قابل ہو کہ اسلام کی تعلیمات کا اصل سرچشمہ قرآن مجید ہے

خصوصی مقاصد: طالب علم اس قابل ہو جائے گا کہ

☆ قرآن مجید کی تعریف کر سکے گا

☆ قرآن مجید کے نزول کی صورت بیان کر سکے

☆ قرآن مجید کی کی و مدنی سورتوں کی پہچان کر سکے

☆ منتخب آیات کا ترجمہ و تشریح کر سکے

عمومی مقصد: یہ سمجھنے کے قابل ہو جائے گا کہ منتخب قرآنی آیات کے ذریعے اسلامی تعلیمات کا مفہوم کیا ہے

☆ قرآنی آیات کا ترجمہ تشریح کر سکے

☆ قرآنی تعلیمات کی روشنی میں اپنی اور معاشرتی اصلاح کر سکے

2. سنت

عمومی مقصد: طالب علم سنت نبوی کی اہمیت اور ضرورت کو اچھی طرح سمجھنے کے قابل ہو جائے گا

خصوصی مقصد:

☆ سنت کی تعریف بیان کر سکے

☆ سنت کی اہمیت و ضرورت کی وضاحت کر سکے

☆ سنت کی روشنی میں اسوہ حسنہ پر عمل کر سکے

3. منتخب احادیث نبویہ

عمومی مقصد: احادیث کی روشنی میں اخلاقی اقدار سے آگاہی حاصل کر سکے

خصوصی مقصد: احادیث کا ترجمہ و تشریح کر سکے

رسول اللہ ﷺ کے اسوۂ حسنہ کی پیروی کا جذبہ پیدا ہو سکے

دین اسلام

عمومی مقاصد: دین اسلام کے بنیادی مقاصد اور عبادات کے بارے میں جان سکے اور بیان کر سکے

خصوصی مقاصد

لفظ دین اسلام کے لغوی اور اصطلاحی معنی بیان کر سکے

اسلام کے بنیادی مقاصد کی اہمیت بیان کر سکے

اسلام کے بنیادی مقاصد سے انسان کی انفرادی و اجتماعی زندگی پر پڑنے والے اثرات بیان کر سکے

عبادت کے لغظی و اصطلاحی معنی بیان کر سکے

عقیدے اور عبادت کا فرق بیان کر سکے

عبادات (نماز، روزہ، حج، زکواۃ) کے فوری، اخلاقی اور انسانی زندگی پر ان کی اثرات بیان کر سکے

اسلامی مقاصد و عبادات کے مطابق اپنی زندگی ڈھال کر ایک اچھا مسلمان بن سکے

(غیر مسلم طلباء کے لئے)

نصاب اخلاقیات سال اول	GEN III	ک ع ی
حصہ دوم مطالعہ پاکستان		1 0 1

موضوعات

کل وقت-20 گھنٹے

اخلاقیات کی تعریف اور اہمیت

اخلاقیات کا معیار (قانون، عقل، الہامی کتب)

مندرجہ ذیل اخلاق کی وضاحت

- ☆ دیانت داری
- ☆ وقار داری
- ☆ نظم و ضبط
- ☆ راست گوئی
- ☆ صبر و استقلال
- ☆ حوصلہ مندی
- ☆ وقت کی پابندی
- ☆ صفائی
- ☆ ایثار
- ☆ باہمی احترام
- ☆ مصلحت

نصاب اخلاقیات (سال اول)

تدریسی مقاصد

عمومی مقاصد: اعلیٰ اخلاق کی وجہ سے ملکی ترقی میں مکمل قدر افزائی کر سکے

خصوصی مقاصد: طالب اس علم سے اس قابل ہو گا کہ

- ☆ موضوعات کا مطلب بیان کر سکے
- ☆ عملی زندگی سے مثالوں کی نشاندہی کر سکے
- ☆ اپنی شخصیت اور معاشرے پر موضوعات کے مثبت اثرات پیدا کرنے کے طریقے بیان کر سکے
- ☆ دیانت داری کی اہمیت بیان کر سکے
- ☆ وفاداری کی اہمیت بیان کر سکے
- ☆ نظم و ضبط کی افادیت بیان کر سکے
- ☆ صدق بیان کی ضرورت بیان کر سکے
- ☆ حوصلہ مندی کے فوائد بیان کر سکے
- ☆ وقت کی پابندی کے فوائد بیان کر سکے
- ☆ صفائی اور باہمی اختیار سے حسن کارکردگی کو بیان کر سکے
- ☆ مصلحت کے فوائد بیان کر سکے

نصاب (سال اول) Gen III

حصہ دوم | مطالعہ پاکستان | کل وقت 12 گھنٹے

موضوعات

☆ حریت فکر: مسلمان قوم میں آزادی فکر کی تاریخ، مسلمانوں میں سیاسی آزادی کی اہمیت اور ضرورت - ذہنی و جسمانی غلامی کے نقصانات

☆ نظریہ پاکستان

قیام پاکستان کی اساس (دین اسلام) قیام پاکستان کی غرض و غایت نظریہ پاکستان کی وضاحت۔ نظریہ پاکستان اور علامہ اقبال اور قائداعظم کے ارشادات کی روشنی میں

☆ نظریہ پاکستان کا تاریخی پہلو

محمد بن قاسم کی آمد، مجدد الف ثانی اور شاہ ولی اللہ کی تبلیغی خدمات سید احمد شہید کی تحریک مجاہدین

☆ تعلیمی تحریکیں

علی گڑھ - ندوت العلماء (دیوبند - مدرسۃ الاسلام - (سندھ) اسلامیہ کالج (پشاور) انجمن حمایت اسلام (لاہور)

مطالعہ پاکستان (حصہ دوئم)

تدریسی مقاصد

حریت فکر:

عمومی مقصد

طالب علم یہ جان لے کہ اسلام میں اور مسلمان قوم میں آزادی فکر کی کیا اہمیت ہے

خصوصی مقاصد

☆ حریت فکر کا معنی و مفہوم بیان کر سکے

☆ آزادی فکر کی اہمیت بیان کر سکے

☆ خصوصاً اسلام میں آزادی اظہار رائے کی اہمیت بیان کر سکے

☆ ذہنی غلامی کے قومی سطح پر نقصانات کے بیان کر سکے

☆ جسمانی غلامی قومی سطح پر نقصانات بیان کر سکے

نظریہ پاکستان

عمومی مقصد:

نظریہ پاکستان (دین اسلام) سے پوری طرح واقفیت ہو جائے

خصوصی مقاصد:

☆ نظریہ کی تعریف بیان کر سکے اور اس کی وضاحت کر سکے

☆ نظریہ پاکستان کی تعریف کر سکے اور اس کا مفہوم بیان کر سکے

☆ علامہ اقبال اور قائداعظم کے فرمودات کی روشنی میں نظریہ پاکستان بیان کر سکے

نظریہ پاکستان کا تاریخی پہلو

عمومی مقصد

☆ نظریہ پاکستان کے تاریخی پس منظر سے واقفیت حاصل کر سکے

خصوصی مقاصد:

☆ محمد بن قاسم کے بارے میں بیان کر سکے

- محمد بن قاسم کے ہندوستان پر حملہ کی وجہ بیان کر سکے
- محمد بن قاسم کے ہندوستان پر حملہ کے اثرات بیان کر سکے
- بیان کر سکے کہ ہندوستان میں ہندو مسلم دو قومی نظریہ کا نکتہ آغاز کیا ہے
- مجدد الف ثانی کی علمی خدمات بیان کر سکے
- شاہ ولی اللہ کی علمی خدمات بیان کر سکے
- مجدد الف ثانی اور شاہ ولی اللہ نے جو تبلیغ دین اور مہمات میں سیاسی شعور پیدا کیا اسے بیان کر سکے

علمی تحریکیں

عمومی مقصد

- برصغیر کی علمی تحریکوں سے آگاہی حاصل ہو سکے

خصوصی مقاصد:

- علی گڑھ - دیوبند - ندوۃ العلماء مدرسۃ السلام ، اسلامیہ کالج۔ انجمن حمایت اسلام نے تعلیم کے ذریعہ سیاسی شعور مسلمانوں میں پیدا کیا اسے بیان کر سکے
- آزادی ہند کے سلسلہ میں تحریک مجاہدین کی خدمات بیان کر سکے

TTQ / CIVIC-111 TARJAMA TUL QURAN / CIVICS

Theory	**32**	**T**	**P**	**C**
Practical	**0**	**1**	**0**	**1**

Note: Syllabi for these subject would be as per BISEs / General education, developed by Punjab Curriculum TextBook Board (PCTB)

Eng-112 ENGLISH

Total contact hours:	**64 Hrs**	**T**	**P**	**C**
Theory:	**64 Hrs**	**2**	**0**	**2**
Practical	**0 Hrs**			

LEARNING OUTCOMES: At the end of the course, the students will be equipped with cognitive skill to enable them to present facts in a systematic and logical manner to meet the language demands of dynamic field of commerce and industry for functional day-to-day use and will inculcate skills of reading, writing and comprehension.

COURSE CONTENTS

ENGLISH PAPER "A"

1 PROSE/TEXT **16 Hrs**

1.1 First eight essays of Intermediate English Book-II

2 CLOZE TEST **4 Hrs**

2.1 A passage comprising 50-100 words will be selected from the text. Every 11th word or any word for that matter will be omitted. The number of missing words will range between 5-10. The chosen word may or may not be the one used in the text, but it should be an appropriate word.

ENGLISH PAPER "B"

1. GRAMMAR **26 Hrs**

1.1 Sentence Structure.

1.2 Tenses.

1.3 Parts of speech.

1.4 Punctuation.

1.5 Change of Narration.

1.6 One word for several

1.7 Words often confused

2. COMPOSITION **12 Hrs**

2.1 Letters/Messages

2.2 Job application letter

2.3 For character certificate/for grant of scholarship

2.4 Telegrams, Cablegrams and Radiograms, Telexes, Facsimiles

2.5 Essay writing

2.6 Technical Education, Science and Our life, Computers, Environmental Pollution, Duties of a Student.

3. TRANSLATION **6 Hrs**

3.1 Translation from Urdu into English.

3.2 For Foreign Students: A paragraph or a dialogue.

RECOMMENDED BOOKS

Technical English developed by Mr. Zia Sarwar, Mr. Habib-ur –Rehman, Evaluated by Mr.Zafar Iqbal Khokhar, Mr. Zahid Zahoor, Vol - I, National Book Foundation

Eng-112 ENGLISH

INSTRUCTIONAL OBJECTIVES

PAPER-A

1. DEMONSTRATE BETTER READING, COMPREHENSION AND VOCABULARY

1.1 Manipulate, skimming and scanning of the text.

1.2 Identify new ideas.

1.3 Reproduce facts, characters in own words

1.4 Write summary of stories

2. UNDERSTAND FACTS OF THE TEXT

2.1 Rewrite words to fill in the blanks recalling the text.

2.2 Use own words to fill in the blanks.

PAPER-B

3. APPLY THE RULES OF GRAMMAR IN WRITING AND SPEAKING

3.1 Use rules of grammar to construct meaningful sentences containing a subject and a predicate.

3.2 State classification of time, i.e present, past and future and use verb tense correctly in different forms to denote relevant time.

3.3 Identify function words and content words.

3.4 Use marks of punctuation to make sense clear.

3.5 Relate what a person says in direct and indirect forms.

3.6 Compose his writings.

3.7 Distinguish between confusing words.

4. APPLY THE CONCEPTS OF COMPOSITION WRITING TO PRACTICAL SITUATIONS

4.1 Use concept to construct applications for employment, for character certificate, for grant of scholarship.

4.2 Define and write telegrams, cablegrams and radiograms, telexes, facsimiles

4.3 Describe steps of a good composition writing.

4.4 Describe features of a good composition.

4.5 Describe methods of composition writing

4.6 Use these concepts to organize facts and describe them systematically in practical situation.

5. APPLIES RULES OF TRANSLATION

5.1 Describe confusion.

5.2 Describe rules of translation.

5.3 Use rules of translation from Urdu to English in simple paragraph and sentences.

Math-113 APPLIED MATHEMATICS

Total Contact Hours	**T**	**P**	**C**
Theory 96 Hrs	**3**	**0**	**3**

Pre-requisites: Must have completed a course of Elective Mathematics at Matric level.

LEARNING OUTCOMES: After completing the course the students will be able to

1. Solve problems of Algebra, Trigonometry, vectors. Menstruation, Matrices and Determinants.
2. Develop skill, mathematical attitudes and logical perception in the use of mathematical instruments as required in the technological fields.
3. Acquire mathematical clarity and insight in the solution of technical problems.

COURSE CONTENTS

1. **QUADRATIC EQUATIONS** **6 Hrs**

1.1 Standard Form

1.2 Solution

1.3 Nature of roots

1.4 Sum & Product of roots

1 .5 Formation

1.6 Problems

2. ARITHMETIC PROGRESSION AND SERIES **3Hrs**

2.1 Sequence

2.2 Series

2.3 nth term

2.4 Sum of the first n terms

2.5 Means

2.6 Problems

3. GEOMETRIC PROGRESSION AND SERIES **3Hrs**

3.1 nth term

3.2 sum of the first n terms

3.3 Means

3.4 Infinite Geometric progression

3.5 Problems

4. BINOMIAL THEOREM 6 Hrs

4.1 Factorials

4.2 Binomial Expression

4.3 Binomial Co-efficient

4.4 Statement

4.5 The General Term

4.6 The Binomial Series.

4.7 Problems

5. PARTIAL FRACTIONS 6 Hrs

5.1 Introduction

5.2 Linear Distinct Factors Case I

5.3 Linear Repeated Factors Case II12

5.4 Quadratic Distinct Factors Case III

5.5 Quadratic Repeated Factors Case IV

5.6 Problems

6. FUNDAMENTALS OF TRIGONOMETRY 6 Hrs

6.1 Angles

6.2 Quadrants

6.3 Measurements of Angles

6.4 Relation between Sexagesimal & circular system

6.5 Relation between Length of a Circular Arc & the Radian Measure of its central Angle

6.6 Problems

7. TRIGONOMETRIC FUNCTIONS AND RATIOS 6 Hrs

7.1 trigonometric functions of any angle

7.2 Signs of trigonometric Functions

7.3 Trigonometric Ratios of particular Angles

7.4 Fundamental Identities

7.5 Problems

8. GENERAL IDENTITIES 6 Hrs

8.1 The Fundamental Law

8.2 Deductions

8.3 Sum & Difference Formulae

8.4 Double Angle Identities

8.5 Half Angle Identities

8.6 Conversion of sum or difference to products

8.7 Problems

9. SOLUTION OF TRIANGLES 6 Hrs

9.1 The law of Sines

9.2 The law of Cosines

9.3 Measurement of Heights & Distances

9.4 Problems

10. MENSURATION OF SOLIDS 30 Hrs

10.1 Review of regular plane figures and Simpson's Rule

10.2 Prisms

10.3 Cylinders

10.4 Pyramids

10.5 Cones

10.6 Frusta

10.7 Spheres

11. VECTORS 9 Hrs

11.1 Sealers & Vectors

11.2 Addition & Subtraction

11.3 The unit Vectors I, j, k

11.4 Direction Cosines

11.5 Sealer or Dot Product

11.6 Deductions

11.7 Dot product in terms of orthogonal components13

11.8 Deductions

11.9 Analytic Expression for a x b.

11.10 Problems.

12. MATRICES AND DETERMINANTS 9 Hrs

12.1 Definition of Matrix

12.2 Rows & Columns

12.3 Order of a Matrix

12.4 Algebra of Matrices

12.5 Determinants

12.6 Properties of Determinants

12.7 Solution of Linear Equations

12.8 Problems

REFERENCE BOOKS

A Text Book of Mathematics (Math-113) by TEVTA, authored by Sana ullah Kan, Tahir Hamid & Nasir ud-Din, published by National Book Foundation.

Math-113 APPLIED MATHEMATICS

INSTRUCTIONAL OBJECTIVES

1. USE DIFFERENT METHODS FOR THE SOLUTION OF QUADRATIC EQUATIONS

1.1 Define a standard quadratic equation.

1.2 Use methods of factorization and method of completing the square for solving the equations.

1.3 Derive quadratic formula.

1.4 Write expression for the discriminant

1.5 Explain nature of the roots of a quadratic equation.

1.6 Calculate sum and product of the roots.

1.7 Form a quadratic equation from the given roots.

1.8 Solve problems involving quadratic equations.

2. UNDERSTAND APPLY CONCEPT OF ARITHMETIC PROGRESSION AND SERIES

2.1 Define an Arithmetic sequence and a series

2.2 Derive formula for the nth term of an A.P.

2.3 Explain Arithmetic Mean between two given numbers

2.4 Insert n Arithmetic means between two numbers

2.5 Derive formulas for summation of an Arithmetic series

2.6 Solve problems on Arithmetic Progression and Series

3. UNDERSTAND GEOMETRIC PROGRESSION AND SERIES

3.1 Define a geometric sequence and a series.

3.2 Derive formula for nth term of a G.P.

3.3 Explain geometric mean between two numbers.

3.4 Insert n geometric means between two numbers.

3.5 Derive a formula for the summation of geometric Series.

3.6 Deduce a formula for the summation of an infinite G.P.

3.7 Solve problems using these formulas.

4. EXPAND AND EXTRACT ROOTS OF A BINOMIAL

4.1 State binomial theorem for positive integral index.

4.2 Explain binomial coefficients: (n,0), (n,1)……..(n,r),…….(n,n)

4.3 Derive expression for the general term.

4.4 Calculate the specified terms.

4.5 Expand a binomial of a given index.

4.6 Extract the specified roots

4.7 Compute the approximate value to a given decimal place.

4.8 Solve problems involving binomials.

5. RESOLVE A SINGLE FRACTION INTO PARTIAL FRACTIONS USING DIFFERENT METHODS.

5.1 Define a partial fraction, a proper and an improper fraction.

5.2 Explain all the four types of partial fractions.

5.3 Set up equivalent partial fractions for each type.

5.4 Explain the methods for finding constants involved.

5.5 Resolve a single fraction into partial fractions.

5.6 Solve problems involving all the four types.

6. UNDERSTAND SYSTEMS OF MEASUREMENT OF ANGLES.

6.1 Define angles and the related terms.15

6.2 Illustrate the generation of angle.

6.3 Explain sexagesimal and circular systems for the measurement of angles

6.4 Derive the relationship between radian and degree.

6.5 Convert radians to degrees and vice versa.

6.6 Derive a formula for the circular measure of a central angle.

6.7 Use this formula for solving problems.

7. APPLY BASIC CONCEPTS AND PRINCIPLES OF TRIGONOMETRIC FUNCTIONS

7.1 Define the basic trigonometric functions/ratios of an angle as ratios of the sides of a right triangle.

7.2 Derive fundamental identities.

7.3 Find trigonometric ratios of particular angles.

7.4 Draw the graph of trigonometric functions.

7.5 Solve problems involving trigonometric functions.

8. USE TRIGONOMETRIC IDENTITIES IN SOLVING TECHNOLOGICAL PROBLEMS

8.1 List fundamental identities

8.2 Prove the fundamental law

8.3 Deduce important results

8.4 Derive-sum and difference formulas

8.5 Establish half angle, double angle & triple angle formulas

8.6 Convert sum or difference into product& vice versa

8.7 Solve problems

9. USE CONCEPTS, PROPERTIES AND LAWS OF TRIGONOMETRIC FUNCTIONS FOR SOLVING TRIANGLES

9.1 Define angle of elevation and angle of depression.

9.2 Prove the law of sins and the law of cosines.

9.3 Explain elements of a triangle.

9.4 Solve triangles and the problems involving heights and distances.

10. USE PRINCIPLES OF MENSTRUATION IN FINDING SURFACES, VOLUMEAND WEIGHTS OF SOLIDS.

10.1 Define menstruation of plane and solid figures

10.2 List formulas for perimeters & areas of plane figure.

10.3 Define pyramid and cone.

10.4 Define frusta of pyramid and cone.

10.5 Define a sphere and a shell.

10.6 Calculate the total surface and volume of each type of solid.

10.7 Compute weight of solids.

10.8 Solve problems of these solids.

11. USE THE CONCEPT AND PRINCIPLES OF VECTORS IN SOLVING TECHNOLOGICAL PROBLEMS.

11.1 Define vector quantity.

11.2 Explain addition and subtraction of vector

11.3 Illustrate unit vectors I, j, k.

11.4 Express a vector in the component form.

11.5 Explain magnitude, unit vector, direction cosines of a vector.

11.6 Derive analytic expression for dot product and cross product of two vector.

11.7 Deduce conditions of perpendicularly and parallelism of two vectors.

11.8 Solve problems16

12. USE THE CONCEPT OFMATRICES & DETERMINANTS IN SOLVING TECHNOLOGICAL PROBLEMS

12.1 Define a matrix and a determinant.

12.2 List types of matrices.

12.3 Define transpose, ad joint and inverse of a matrix.

12.4 State properties of determinants.

12.5 Explain basic concepts.

12.6 Explain algebra of matrices.

12.7 Solve linear equation by matrices.

12.8 Explain the solution of a determinant.

12.9 Use crammers rule for solving linear equations.

Phy 132 APPLIED PHYSICS

Total Contact Hours

		T	P	C
Theory	32 Hrs			
Practical	96 Hrs	**1**	**3**	**2**

LEARNING OUTCOMES: The students will be able to understand the fundamental principles and concept of physics, use these to solve problems in practical situations/technological courses and understand concepts to learn advance physics/technical courses.

COURSE CONTENTS

1. **MEASUREMENT** **2 Hrs**

1.1 Fundamental units and derived units

1.2 Systems of measurement and S.I. units

1.3 Concept of dimensions, dimensional formula

1.4 Conversion from one system to another

1.5 Significant figures

2. **SCALARS AND VECTORS** **4 Hrs**

2.1 Revision of head to tail rule

2.2 Laws of parallelogram, triangle and polygon of forces

2.3 Resolution of a vector

2.4 Addition of vectors by rectangular components

2.5 Multiplication of two vectors, dot product and cross product

3. **MOTION** **4 Hrs**

3.1 Review of laws and equations of motion

3.2 Law of conservation of momentum

3.3 Angular motion

3.4 Relation between linear and angular motion

3.5 Centripetal acceleration and force

3.6 Equations of angular motion

4.	**TORQUE, EQUILIBRIUM AND ROTATIONAL INERTIA**	**6 Hrs**
4.1	Torque	
4.2	Centre of gravity and centre of mass	
4.3	Equilibrium and its conditions	
4.4	Torque and angular acceleration	
4.5	Rotational inertia	
5.	**WAVE MOTION**	**4 Hrs**
5.1	Review Hooke's law of elasticity	
5.2	Motion under an elastic restoring force	
5.3	Characteristics of simple harmonic motion	
5.4	S.H.M. and circular motion	
5.5	Simple pendulum	
5.6	Wave form of S.H.M.	
5.7	Resonance	
5.8	Transverse vibration of a stretched string	
6.	**SOUND**	**4 Hrs**
6.1	Longitudinal waves	
6.2	Intensity, loudness, pitch and quality of sound	
6.3	Units of Intensity of level and frequency response of ear	
6.4	Interference of sound waves silence zones, beats	
6.5	Acoustics	
6.6	Doppler effect.	
7.	**LIGHT**	**4 Hrs**
7.1	Review laws of reflection and refraction	
7.2	Image formation by mirrors and lenses	
7.3	Optical instruments	
7.4	Wave theory of light	
7.5	Interference, diffraction, polarization of light waves	
7.6	Applications of polarization in sunglasses, optical activity and stress analysis	
8	**OPTICAL FIBRE**	**2 Hrs**

8.1 Optical communication and problems

8.2 Review total internal reflection and critical angle

8.3 Structure of optical fiber

8.4 Fiber material and manufacture

8.5 Optical fiber - uses.

9. **LASERS** **2 Hrs**

9.1 Corpuscular theory of light

9.2 Emission and absorption of light

9.3 Stimulated absorption and emission of light

9.4 Laser principle

9.5 Structure and working of lasers

9.6 Types of lasers with brief description.

9.7 Applications (basic concepts)

9.8 Material processing

9.9 Laser welding

9.10 Laser assisted machining

9.11 Micro machining

9.12 Drilling, scribing and marking

9.13 Printing

9.14 Lasers in medicine

RECOMMENDED BOOKS

1.Tahir Hussain, Fundamentals of Physics Vol-I and II

2.Farid Khawaja, Fundamentals of Physics Vol-I and II

3.Wells and Slusher, Schaum's Series Physics .

4.Nelkon and Oyborn, Advanced Level Practical Physics

5.Mehboob Ilahi Malik and Inam-ul-Haq, Practical Physics

6.Wilson, Lasers - Principles and Applications

7.M. Aslam Khan and M. Akram Sandhu, Experimental Physics Note Book

Phy-132 APPLIED PHYSICS

INSTRUCTIONAL OBJECTIVES

1. **USE CONCEPTS OF MEASUREMENT TO PRACTICAL SITUATIONS AND TECHNOLOGICAL PROBLEMS**

7.1 Write dimensional formulae for physical quantities
7.2 Derive units using dimensional equations
7.3 Convert a measurement from one system to another
7.4 Use concepts of measurement and Significant figures in problem solving.

8. **USE CONCEPTS OF SCALARS AND VECTORS IN SOLVING PROBLEMS INVOLVING THESE CONCEPTS**

8.1 Explain laws of parallelogram, triangle and polygon of forces
8.2 Describe method of resolution of a vector into components
8.3 Describe method of addition of vectors by rectangular components
8.4 Differentiate between dot product and cross product of vectors
8.5 Use the concepts in solving problems involving addition resolution and multiplication of vectors.

9. **USE THE LAW OF CONSERVATION OF MOMENTUM AND CONCEPTS OF ANGULAR MOTION TO PRACTICAL SITUATIONS**

9.1 Use law of conservation of momentum to practical/technological problems.

9.2 Explain relation between linear and angular motion

9.3 Use concepts and equations of angular motion to solve relevant technological problems.

10. **USE CONCEPTS OF TORQUE, EQUILIBRIUM AND ROTATIONAL INERTIA TO PRACTICAL SITUATIONS/PROBLEMS**

10.1 Explain Torque

10.2 Distinguish between Centre of gravity and centre of mass

10.3 Explain rotational Equilibrium and its conditions

10.4 Explain Rotational Inertia giving examples

10.5 Use the above concepts in solving technological problems.

11. **USE CONCEPTS OF WAVE MOTION IN SOLVING RELEVANT PROBLEMS**

11.1 Explain Hooke's Law of Elasticity

11.2 Derive formula for Motion under an elastic restoring force

11.3 Derive formulae for simple harmonic motion and simple pendulum

11.4 Explain wave form with reference to S.H.M. and circular motion

11.5 Explain Resonance

11.6 Explain Transverse vibration of a stretched string

11.7 Use the above concepts and formulae of S.H.M. to solve relevant problems.

12. **UNDERSTAND CONCEPTS OF SOUND**

12.1 Describe longitudinal wave and its propagation

12.1 Explain the concepts: Intensity, loudness, pitch and quality of sound

12.2 Explain units of Intensity of level and frequency response of ear

12.3 Explain phenomena of silence zones, beats

12.4 Explain Acoustics of buildings

12.5 Explain Doppler Effect giving mathematical expressions.

13 **USE THE CONCEPTS OF GEOMETRICAL OPTICS TO MIRRORS AND LENSES**

13.1 Explain laws of reflection and refraction

13.2 Use mirror formula to solve problems

13.3 Use the concepts of image formation by mirrors and lenses to describe working of optical instruments, e.g. microscopes, telescopes, camera and sextant.

14. **UNDERSTAND WAVE THEORY OF LIGHT**

14.4 Explain wave theory of light

14.5 Explain phenomena of interference, diffraction, polarization of light waves

14.6 Describe uses of polarization given in the course contents.

15. **UNDERSTAND THE STRUCTURE, WORKING AND USES OF OPTICAL FIBER**

15.1 Explain the structure of the Optical Fiber

15.2 Explain its principle of working

15.3 Describe use of optical fiber in industry and medicine.

Phy-132 APPLIED PHYSICS

LIST OF PRACTICALS 96 Hrs

1. Draw graphs representing the functions:
   a. y=mx for m=0, 0.5, 1, 2
   b. $y=x^2$
   c. y=1/x
2. Find the volume of a given solid cylinder using vernier callipers.
3. Find the area of cross-section of the given wire using micrometer screw gauge.
4. Prove that force is directly proportional to (a) mass, (b) acceleration, using fletchers' trolley.
5. Verify law of parallelogram of forces using Grave-sands apparatus.
6. Verify law of triangle of forces and Lami's theorem
7. Determine the weight of a given body using
   a. Law of parallelogram of forces
   b. Law of triangle of forces
   c. Lami's theorem
8. Verify law of polygon of forces using Grave-sands apparatus.
9. Locate the position and magnitude of resultant of like parallel forces.
10. Determine the resultant of two unlike parallel forces.
11. Find the weight of a given body using principle of moments.
12. Locate the centre of gravity of regular and irregular shaped bodies.
13. Find Young's Modules of Elasticity of a metallic wire.
14. Verify Hooke's Law using helical spring.
15. Study of frequency of stretched string with length.
16. Study of variation of frequency of stretched string with tension.
17. Study resonance of air column in resonance tube and find velocity of sound.
18. Find the frequency of the given tuning fork using resonance tube.
19. Find velocity of sound in rod by Kundt's tube.

20. Verify rectilinear propagation of light and study shadow formation.
21. Study effect of rotation of plane mirror on reflection.
22. Compare the refractive indices of given glass slabs.
23. Find focal length of concave mirror by locating centre of curvature.
24. Find focal length of concave mirror by object and image method
25. Find focal length of concave mirror with converging lens.
26. Find refractive index of glass by apparent depth.
27. Find refractive index of glass by spectrometer.
28. Find focal length of converging lens by plane mirror.
29. Find focal length of converging lens by displacement method.
30. Find focal length of diverging lense using converging lens.
31. Find focal length of diverging lens using concave mirror.
32. Find angular magnification of an astronomical telescope.
33. Find angular magnification of a simple microscope (magnifying glass)
34. Find angular magnification of a compound microscope.
35. Study working and structure of camera.
36. Study working and structure of sextant.
37. Compare the different scales of temperature and verify the conversion formula.
38. Determine the specific heat of lead shots.
39. Find the coefficient of linear expansion of a metallic rod.
40. Find the heat of fusion of ice.
41. Find the heat of vaporization.
42. Determine relative humidity using hygrometer

CH – 112 APPLIED CHEMISTRY

Total contact hours:	**128 Hrs**	**T**	**P**	**C**
Theory:	**32 Hrs**	**1**	**3**	**2**
Practical	**96 Hrs**			

LEARNING OUTCOMES: After studying this course a student will be able to:

1. Understand the significance and role of chemistry in the development of modern technology
2. Become acquired with the basic principles of chemistry as applied in the study of relevant technology.
3. Know the scientific methods for production, and use of materials of industrial & technological significance.
4. Gains skill for the efficient conduct of Practical in a chemistry lab.

COURSE CONTENTS

1. INTRODUCTION AND FUNDAMENTAL CONCEPTS 2 Hrs

1.1. Orientation with reference to this technology

1.2. Terms used & units of measurements in the study of chemistry

1.3. Chemical reactions & their types

2. ATOMIC STRUCTURE 2 Hrs

2.1 Sub atomic particles

2.2 Architecture of atoms of elements. Atomic no. & atomic weight

2.3 The periodic classification of elements periodic law

2.4 General characteristics of a period and group

3. CHEMICAL BOND 2 Hrs

1.1. Nature of chemical bond

1.2. Electrovalent bond with examples

1.3. Covalent bond (polar and non-polar, sigma & pie bonds with examples)

1.4. Co-ordinate bond with examples

4. WATER 2 Hrs

4.1. Chemical nature and properties

4.2. Impurities

4.3. Hardness of water (types, causes and removal)

4.4. Scales of measuring hardness (degrees Clark French, PPM, Mg- per liter)

4.5. Boiler feed water, scales and treatment

4.6. Sea water desalination, sewage treatment

5. ACIDS, BASES AND SALTS 2 Hrs

5.1. Definitions with examples

5.2. Properties, their strength, basicity and acidity

5.3. Salts and their classification with examples

5.4. Ph – value and scale

6. OXIDATION & REDUCTION 2 Hrs

6.1. The process, definition and examples

6.2. Oxidizing and reducing agents

6.3. Oxides and their classifications

7. NUCLEAR CHEMISTRY 2 Hrs

7.1. Introduction

7.2. Radioactivity (alpha, beta and gamma rays)

7.3. Half-life process

7.4. Nuclear reaction and transformation of elements

8. CEMENT 2 Hrs

8.1. Introduction

8.2. Composition and manufacture

8.3. Chemistry of setting and hardening

8.4. Special purpose cements

9. GLASS 2 Hrs

9.1. Composition and raw material

9.2. Manufacture

9.3. Varieties and uses

10. PLASTICS AND POLYMERS 2 Hrs

10.1. Introduction and importance

10.2. Classification

10.3. Manufacture

10.4. Properties and uses

11. PAINTS, VARNISHES AND DISTEMPER 2 Hrs

11.1. Introduction

11.2. Constituents

11.3. Preparation and use

12. CORROSION 2 Hrs

12.1. Introduction with causes

12.2. Types of corrosion

12.3. Rusting of iron

12.4. Protective measures against corrosion

13. REFRACTORY MATERIALS AND ABRASIVE 2 Hrs

13.1. Introduction to refractories

13.2. Classification of refractories

13.3. Properties and uses

13.4. Introduction to abrasives

13.5. Artificial and natural abrasives and their uses

14. ALLOYS 2 Hrs

14.1. Introduction with need

14.2. Preparation and properties

14.3. Some important alloys and their composition

14.4. Uses

15. FUELS AND COMBUSTION 2 Hrs

15.1. Introduction of fuels

15.2. Classification of fuels

15.3. Combustion

15.4. Numerical problems of combustion

16. LUBRICANTS 1 Hrs

16.1. Introduction

16.2. Classification

16.3. Properties of lubricants

16.4. Selection of lubricants

17. POLLUTION 1 Hr

17.1. The problems and its dangers

17.2. Causes of pollution

17.3. Remedies to combat the hazards of pollution

RECOMMENDED BOOKS

Text Book of Ch-112, Vol-I, developed by Curriculum Section, Academics wing TEVTA and published by National Book Foundation (NBF)

CH – 112 APPLIED CHEMISTRY

INSTRUCTIONAL OBJECTIVES

1. UNDERSTAND THE SCOPE, SIGNIFICANCE AND FUNDAMENTAL ROLE OF THE SUBJECT

1.1. Define chemistry and its important terms

1.2. State the units of measurements in the study of chemistry

1.3. Write chemical formula of common compounds

1.4. Describe types of chemical reactions with examples

2. UNDERSTAND THE STRUCTURE OF ATOMS AND ARRANGEMENT OF SUB ATOMIC PARTICLES IN THE ARCHITECTURE OF ATOMS

2.1. Define atom

2.2. State the periodic law of elements

2.3. Describe the fundamentals sub atomic particles

2.4. Distinguish between atomic no. And mass no. Isotopes and isobars

2.5. Explain the arrangements of electrons in different shells and sub energy levels

2.6. Explain the grouping and placing of elements in the periodic table

3. UNDERSTAND THE NATURE OF CHEMICAL BOND

3.1. Define chemical bond

3.2. Describe the nature of chemical bond

3.3. Differentiate between electrovalent and covalent bonding

3.4. Explain the formation of polar and non polar, sigma and pi-bond with examples

3.5. Describe the nature of coordinate bond with examples

4. UNDERSTAND THE CHEMICAL NATURE OF WATER

4.1. Describe the chemical nature of water with its formula

4.2. Describe the general impurities present in water

4.3. Explain the causes and methods to removing hardness of water

4.4. Express hardness in different units like mg / liter, p.p.m, degrees clark and degrees French

4.5. Describe the formation and nature of scales in boiler feed water

4.6. Explain the method for the treatment of scales

4.7. Explain the sewage treatment and desalination of sea water

5. UNDERSTAND THE NATURE OF ACIDS, BASES AND SALTS

5.1. Define acids, bases and salts with examples

5.2. State general properties of acids and bases

5.3. Differentiate between acidity and basicity and use the related terms

5.4. Define salts, state their classification with examples

5.5. Explain p-h value of solution and pH-scale

6. UNDERSTAND THE PROGRESS OF OXIDATION AND REDUCTION

6.1. Define oxidation

6.2. Explain the oxidation process with examples

6.3. Define reduction

6.4. Explain reduction process with examples

6.5. Define oxidizing and reducing agents and give at least six examples of each

6.6. Define oxides

6.7. Classify the oxides and give examples

7. UNDERSTAND THE FUNDAMENTALS OF NUCLEAR CHEMISTRY

7.1. Define nuclear chemistry and radioactivity

7.2. Differentiate between alpha, beta and gama particles

7.3. Explain half life process

7.4. Explain at least six nuclear reactions resulting in the transformation of some elements

7.5. State important uses of isotopes

8. UNDERSTAND THE MANUFACTURE, SETTING AND HARDENING OF CEMENT

8.1. Define Portland cement and give its composition

8.2. Describe the method of manufacture

8.3. Describe the chemistry of setting and hardening of cement

8.4. Distinguish between ordinary and special purpose cement

9. UNDERSTAND THE PROCESS OF MANUFACTURE OF GLASS

9.1. Define glass

9.2. Describe its composition and raw materials

9.3. Describe the manufacture of glass

9.4. Explain its varieties and uses

10. UNDERSTAND THE NATURE AND IMPORTANCE OF PLASTIC AND POLYMERS

10.1. Define plastics and polymers

10.2. Explain the mechanism of polymerization

10.3. Describe the preparation and uses of some plastic / polymers

11. KNOW THE CHEMISTRY OF PAINTS, VARNISHES AND DISTEMPERS

11.1. Define paints, varnishes and distemper

11.2. State composition of each

11.3. State methods of preparation of each and their uses

12. UNDERSTAND THE PROCESS OF CORROSION WITH ITS CAUSES AND TYPES

12.1. Define corrosion

12.2. Describe different types of corrosion. State the causes of corrosion

12.3. Explain the process of rusting of iron

12.4. Describe methods to prevent/ control corrosion

13. UNDERSTAND THE NATURE OF REFRACTORY MATERIALS ABRASIVE

13.1. Define refractory materials

13.2. Classify refractory materials

13.3. Describe properties and uses of refractory

13.4. Define abrasive

13.5. Classify natural and artificial abrasives

13.6. Describe uses of abrasives `

14. UNDERSTAND THE NATURE AND IMPORTANCE OF ALLOYS

14.1. Define alloy

14.2. Describe different methods for the preparation of alloys

14.3. Describe important properties of alloys

14.4. Enlist some important alloys with their composition, properties and uses

15. UNDERSTAND THE NATURE OF FUELS AND THEIR COMBUSTION

15.1. Define fuels

15.2. Classify fuels and make distinction of solid, liquid and gaseous fuels

15.3. Describe important fuels

15.4. Explain combustion

15.5. Calculate air quantities in combustion gases

16. UNDERSTAND THE NATURE OF LUBRICANTS

16.1. Define a lubricant

16.2. Explain the uses of lubricants

16.3. Classify lubricants and site examples

16.4. State important properties of oils, greases and solid lubricants

16.5. State the criteria for the selection of lubricant for particular purpose / job

17. UNDERSTAND THE NATURE OF POLLUTION

17.1. Define pollution (air, water, food)

17.2. Describe the causes of environmental pollution

17.3. Enlist some common pollutants

17.4. Explain methods to prevent pollution

Ch-112: APPLIED CHEMISTRY

LIST OF PRACTICALS

96 Hrs

On completion of this course, the trainees will be able to;

1. To introduce the common apparatus, glassware and chemical reagents used in the chemistry lab.
2. To purify a chemical substance by crystallization.
3. To separate a mixture of sand and salt.
4. To find the melting point of substance.
5. To find the pH of a solution with pH paper.
6. To separate a mixture of inks by chromatography.
7. To determine the co-efficient of viscosity of benzene with the help of Ostwald's vasomotor.
8. To find the surface tension of a liquid with a stalagmometer.
9. To perform electrolysis of water to produce Hydrogen and Oxygen.
10. To determine the chemical equivalent of copper by electrolysis of Cu SO_4.
11. Determination of Heat of Neutralization of NaOH and HCl.
12. Determination of Heat of Solution of C_2H_5OH and H_2O.
13. Determination of %age of O_2 in air.
14. Determination of %age of N_2 in air.
15. Determination of %age of CO_2 in air.
16. To get introduction with the methods/apparatus of conducting volumetric estimation.
17. To prepare standard solution of a substance.
18. To find the strength of a given alkali solution.
19. To estimate HCO_3^{-1} contents in water.
20. To estimate Cl^{-1} contents in water.
21. To estimate SO_4^{-2} contents in water.
22. To estimate total solids in water.
23. To find out the %age composition of a mixture solution of KNO_3 and KOH volumetrically.
24. To find out the amount of Na_2SO_4 and NaOH in their mixture with titration method.
25. To find the boiling point of Freon-12, or R-134a and Freon-22.
26. To find the density of Freon-12, or R 134a and Freon-22 with the help of sp. gravity bottle.
27. To prepare Ammonia gas in Laboratory and perform its tests.
28. To get introduction with the scheme of analysis of salts for basic radicals.
29. To analyse Ist group radials (Ag^{+1}, Pb^{+2}, Hg^{+1}).
30. To exercise Practice for detection of Ist group radicals.
31. To detect and confirm II-A group radicals (Hg^{+2}, Pb^{+4}, Cu^{+2}, Bi^{+3}, Cd^{+2})
32. To detect and confirm II-B group radicals (AS^{+3}, Sb^{+3}, $Sn^{+2,\ +4}$)

Comp-102 COMPUTER APPLICATIONS

Total Contact Hours

Theory	32 Hrs	**T**	**P**	**C**
Practical	96 Hrs	**1**	**3**	**2**

Pre-requisites: None

LEARNING OUTCOMES: This subject will enable the student to be familiar with the fundamental concepts of Computer Science. He will also learn MS-Windows, MS-Office, and Internet to elementary level.

COURSE CONTENTS

1. ELECTRONIC DATA PROCESSING (E.D.P.) 2 Hrs

1.1 Basic Terms of Computer Science Data & its, types, Information, Hardware, Software

1.2 Computer & its types

1.3 Block diagram of a computer system

1.4 BIT, Byte, RAM & ROM

1.5 Input &Output devices

1.6 Secondary storage devices

1.7 Types of Software

1.8 Programming Languages

1.9 Applications of computer in different fields

1.10 Application in Engineering, Education & Business

2. MS-WINDOWS 1 Hr

2.1 Introduction to Windows

2.2 Loading & Shut down process

2.3 Introduction to Desktop items (Creation of Icons, Shortcut, Folder & modify Taskbar)

2.4 Desktop properties

2.5 Use of Control Panel

2.6 Searching a document

3. MS-OFFICE (MS-WORD) 4 Hrs

3.1 Introduction to MS-Office

3.2 Introduction to MS-Word & its Screen

3.3 Create a new document

3.4 Editing & formatting the text

3.5 Saving & Opening a document

3.6 Page setup (Set the Margins & Paper)

3.7 Spell Check & Grammar

3.8 Paragraph Alignment

3.9 Inserting Page numbers, Symbols, Text box & Picture in the document

3.10 Use the different Format menu drop down commands(Drop Cap, Change Case, Bullet & Numbering and Border & Shading)

3.11 Insert the 'Table and it's Editing

3.12 Printing the document

3.13 Saving a document file as PDF format

4. MS-OFFICE (MS-EXCEL) 6 Hrs

4.1 Introduction to MS-Excel & its Screen

4.2 Entering data & apply formulas in worksheet

4.3 Editing & Formatting the Cells, Row & Colum30

4.4 Insert Graphs in sheet

4.5 Page setup, Print Preview & Printing

4.6 Types & Categories of Charts

5. MS. OFFICE (MS-POWER POINT) 2 Hrs

5.1 Introduction to MS-Power point

5.2 Creating a, presentation

5.3 Editing & formatting a text box

5.4 Adding pictures & colors to a slide

5.5 Making slide shows

5.6 Slide Transition

6. INTERNET & E-MAIL 1 Hr

6.1 Introduction to Internet & browser window

6.2 Searching, Saving and Print a page from internet

6.3 Creating, Reading & Sending E-Mail

6.4 Explain some advance features over the internet and search engines

7. Introduction to Graphics 16Hrs

7.1 Introduction to Graphics

7.2 Adobe Illustrator

7.3 Adobe Photoshop

Recommended Textbooks:

1. Bible Microsoft Office 2007 by John Walkenbach
2. Bible Microsoft Excel 2007 by John Walkenbach
3. Bible Microsoft PowerPoint 2007 by John Walkenbach
4. Andrew Faulkner and Conrad Shavez, Adobe Photoshop CC Classroom in a Book (2017 release), 1st Edition, Adobe Press

Comp-102 COMPUTER APPLICATIONS

INSTRUCTIONAL OBJECTIVES

1. UNDERSTAND ELECTRONIC DATA PROCESSING (E.D.P)

1.1. Describe Basic Terms of Computer Science.Data& its Types, Information, Hardware,Software

1.2. Explain Computer & its types

1.3. Explain Block diagram of a computer system

1.4. State the terms such as BIT, Byte, RAM & ROM

1.5. Identify Input & Output devices

1.6. Describe Secondary Storage devices

1.7. Explain Types of Software

1.8. Introduction to Programming Language

1.9. Explain Applications of computer in different fields

1.10. Application in Engineering, Education & Business

2. UNDERSTAND MS-WINDOWS

2.1 Explain Introduction to Windows

2.2 Describe Loading & Shut down process

2.3 Explain Introduction to Desktop items(Creation of Icons, Shortcut, Folder & modify Taskbar)

2.4 Explain Desktop properties

2.5 Describe Use' of Control Panel (add/remove program, time & date, mouse and create user account)

2.6 Explain the method of searching a document

3. UNDERSTAND MS-OFFICE (MS-WORD)

3.1 Explain Introduction to MS-Office

3.2 Describe -Introduction to MS-Word & its Screen

3.3 Describe create a new document

3.4 Explain Editing & formatting the text

3.5 Describe saving & Opening a document

3.6 Explain Page setup, (Set the Margins & Paper)

3.7 Describe Spell Check & Grammar

3.8 Explain Paragraph Alignment

3.9 Explain Inserting Page numbers, Symbols, Text box & Picture in the document

3.10 Describe Use the different Format menu drop down commands(Drop Cap, Change Case, Bullet &Numbering and Border & Shading)

3.11 Explain Insert the Table and its Editing and modifying

3.12 Describe printing the document

3.13 Describe the method of file saving as a PDF Format

4. UNDERSTAND MS-OFFICE (MS-EXCEL)

4.1 Explain Introduction to MS-Excel & its Screen

4.2 Describe Entering data & apply formulas in worksheet

4.3 Describe Editing &Formatting the, Cells, Row & Column

4.4 Explain Insert Graphs in sheet

4.5 Describe Page setup, Print preview & Printing

4.6 Explain in details formulas for sum, subtract, multiply, divide, average

4.7 Explain in details the types of charts e.g pie chart, bar chart

5. UNDERSTAND MS-OFFICE (MS-POWER POINT)

5.1 Describe Introduction to MS-Power point

5.2 Explain creating a presentation

5.3 Describe Editing & formatting a text box

5.4 Explain Adding pictures & colors to a slide32

5.5 Describe Making slide shows

5.6 Explain Slide Transitions

6. UNDERSTAND INTERNET &E-MAIL

6.1 Explain Introduction to Internet and browser window

6.2 Explain Searching, Saving and Print a page from internet

6.3 Describe Creating, Reading & Sending E-Mail and attachments

6.4 Explain some advance features over the internet and how to search topics on different search engines

7. INTRODUCTION TO GRAPHICS

7.1 To learn about graphics in Corel Draw

7.2 To learn vector graphics

7.3 To learn about composing

7.4 To learn about graphics in Adobe Photoshop

7.5 To learn about modification in pictures

7.6 To apply various filters in pictures33

Comp-102 COMPUTER APPLICATIONS

LIST OF PRACTICALS **96 Hrs**

1. Practice of loading and shutdown of operating system
2. Creating items (icons, shortcut, folders etc) and modifying taskbar
3. Changing of wallpaper, screensaver, and resolution
4. Practice of control panel items (add/remove, time and date, mouse, and create user account)
5. Identifying the MS Word Screen and its menu
6. Practice of create a new document, saving and re-opening it from the location and spell check & grammar
7. Practice of Page Formatting (Borders, Character Spacing, Paragraph, Bullets& Numberings and Fonts)
8. Practice of different tool bars like standard, format& drawing tool bars
9. Practice of Insert pictures, clipart, and shapes
10. Practice of header and footer
11. Practice of insert table and also format of table
12. Practice of page setup, set the page margins, and printing documents
13. Identifying the MS EXCEL Screen and its menu
14. Practice of create a new sheet, saving and re-opening it from the location and spell check
15. Practice of insert and delete of row and columns (format of cell)
16. Practice of entering data and formulas in worksheet(Add, Subtract, Multiplying, and Divide & Average)
17. Repeating practical serial number04
18. Practice of insert chart and its types
19. Practice of page setup, set the page margins, and printing
20. Identifying the MS POWER POINT Screen and its menu
21. Practice of create a new presentation and save
22. Practice of open saves presentations

23. Practice of inset picture and videos
24. Identifying internet explorer
25. Practice of searching data from any search engine
26. Practice of create an E-Mail account and how to send and receive mails, download Attachments
27. To make exercises of basic tools in Illustrator (10 exercises)
28. To make various visiting cards (5 exercises)
29. To exercise the about composing (5 exercises)
30. To make logos (5 exercises)
31. To make exercise of basic tools Adobe Photoshop (10 exercises)
32. To make exercise in modification in pictures (10 exercises)
33. To apply various filters in pictures (15 exercises)

EC-113 E-COMMERCE FUNDAMENTALS

Total Contact Hours

		T	P	C
Theory	64 Hrs			
Practical	96 Hrs	**2**	**3**	**3**

LEARNING OUTCOMES: This course covers the main aspects of e-commerce from technological fundamentals to the application of business models. Through this course, students will grasp the basic concepts, ideas, and analytical methods of e-commerce, gain a comprehensive understanding of e-commerce operations, and strengthen their awareness of the e-commerce field and career opportunities. The course aims to cultivate e-commerce thinking and professional qualities, assist in understanding and analyzing real-world e-commerce phenomena, and apply e-commerce theories to solve practical e-commerce problems.

COURSE CONTENTS

1. OVERVIEW OF E-COMMERCE 4 Hrs

1.1 Meaning of e-commerce

1.2 Functional characteristics of e-commerce

1.3 Development of e-commerce

1.4 Application of new technologies in e-commerce

2. E-COMMERCE MODELS 12 Hrs

2.1 B2B e-commerce model

2.2 B2C e-commerce model

2.3 C2C e-commerce model

2.4 O2O e-commerce model

2.5 B2B2C e-commerce model

2.6 D2C e-commerce model

2.7 Social commerce and live stream commerce

3. E-COMMERCE MARKETING METHODS 8 Hrs

3.1 Search engine marketing

3.2 Social media marketing

3.3 Content marketing

3.4 Affiliate marketing

3.5 Promotions and event marketing

4. E-COMMERCE PAYMENT SYSTEMS 8 Hrs

4.1 Meaning and characteristics of e-commerce payments

4.2 Components of e-commerce payment systems

4.3 E-commerce payment methods

4.4 E-commerce payment processes

5. E-COMMERCE LOGISTICS 8 Hrs

5.1 Meaning and characteristics of e-commerce logistics

5.2 Models of e-commerce logistics

5.3 Advantages of e-commerce logistics

5.4 Development trends in e-commerce logistics

6. E-COMMERCE SECURITY AND REGULATIONS 8 Hrs

6.1 Meaning of e-commerce security

6.2 Security issues in e-commerce

6.3 Artificial intelligence security technologies in e-commerce

6.4 E-commerce legal legislation

6.5 Legal entities in e-commerce

7. MOBILE E-COMMERCE 8 Hrs

7.1 Meaning of mobile e-commerce

7.2 Characteristics of mobile e-commerce

7.3 Applications of mobile e-commerce

7.4 Development overview of mobile e-commerce

8. CROSS-BORDER E-COMMERCE 8 Hrs

8.1 Meaning of cross-border e-commerce

8.2 Characteristics of cross-border e-commerce

8.3 Main platforms for cross-border e-commerce

8.4 Development overview of cross-border e-commerce

EC-113 E-COMMERCE FUNDAMENTALS

INSTRUCTIONAL OBJECTIVES

1. OVERVIEW OF E-COMMERCE

1.1 Understand the meaning of e-commerce

1.2 Familiarize with the functional characteristics of e-commerce

1.3 Master the development of e-commerce

2. E-COMMERCE MODELS APPLICATION

2.1 Master the B2B e-commerce model

2.2 Familiarize with the B2C e-commerce model

2.3 Understand the C2C e-commerce model

2.4 Familiarize with the O2O e-commerce model

2.5 Understand the B2B2C e-commerce model

2.6 Understand the D2C e-commerce model

2.7 Familiarize with social commerce and live stream commerce

3. E-COMMERCE MARKETING METHODS

3.1 Master search engine marketing methods

3.2 Familiarize with social media marketing methods

3.3 Understand content marketing methods

3.4 Understand common affiliate marketing methods

3.5 Master promotion and event marketing methods

4. E-COMMERCE PAYMENT SYSTEMS

4.1 Understand the meaning of e-commerce payments

4.2 Familiarize with the characteristics of e-commerce payments

4.3 Understand the components of the e-commerce payment systems

4.4 Familiarize with e-commerce payment methods

4.5 Master the e-commerce payment process

5. E-COMMERCE LOGISTICS

5.1 Understand the meaning of e-commerce logistics

5.2 Familiarize with the characteristics of e-commerce logistics

5.3 Familiarize with e-commerce logistics models

5.4 Understand the advantages of e-commerce logistics

5.5 Understand the development trends of e-commerce logistics

6. E-COMMERCE SECURITY AND REGULATIONS

6.1 Understand the meaning of e-commerce security

6.2 Familiarize with the security issues faced by e-commerce

6.3 Understand the artificial intelligence security technologies in e-commerce

6.4 Familiarize with the legislative situation of e-commerce laws

6.5 Master the legal entities in e-commerce

7. MOBILE E-COMMERCE

7.1 Understand the meaning of mobile e-commerce

7.2 Familiarize with the characteristics of mobile e-commerce

7.3 Master the applications of mobile e-commerce

7.4 Understand the development overview of mobile e-commerce

8. CROSS-BORDER E-COMMERCE

8.1 Understand the meaning of cross-border e-commerce

8.2 Familiarize with the characteristics of cross-border e-commerce

8.3 Master the main platforms of cross-border e-commerce

8.4 Understand the development overview of cross-border e-commerce

EC-113 E-COMMERCE FUNDAMENTALS

LIST OF PRACTICALS **96 Hrs**

1. Research on the current status of the e-commerce industry
2. Analysis of e-commerce industry development trends
3. Research on B2B e-commerce platform features
4. Research on B2C e-commerce platform features
5. Research on C2C e-commerce platform features
6. Transaction experience on B2C e-commerce platforms
7. Analysis of O2O business models and service strategies
8. Analysis of different online marketing tools' application scenarios
9. Analysis of successful online marketing cases
10. Registration of electronic currency accounts
11. Analysis of different online banks' service features
12. Online payment and settlement process experience
13. Research on e-commerce logistics operational processes
14. Analysis of the advantages and disadvantages of different e-commerce logistics models
15. Discussion on new technologies and application scenarios in electronic logistics
16. Case study analysis of typical e-commerce laws and regulations
17. Research on secure transaction technologies in e-commerce
18. Analysis of security risks in e-commerce
19. Research on the current status of mobile e-commerce
20. Research on cross-border e-commerce platforms

EC-123 RETAIL FUNDAMENTALS

Total Contact Hours

		T	P	C
Theory	64 Hrs			
Practical	96 Hrs	**2**	**3**	**3**

LEARNING OUTCOMES: The course aims to cultivate students' understanding of the retail industry. It covers the business logic of "people," "goods," and "place," retail formats, product knowledge, and retail information technology. Students will master core retail skills, including tasks such as retail site selection, retail purchasing, retail pricing, retail promotion, retail services, and retail business management. This course lays a solid foundation for students' future career paths.

COURSE CONTENTS

1. RETAIL AWARENESS 8 Hrs

1.1 Meaning of retail and the retail industry

1.2 Current state of the retail industry

1.3 Trends in retail development

2. RETAIL FORMATS 8 Hrs

2.1 Characteristics of retail formats

2.2 Main types of retail formats

3. RETAIL SITE SELECTION 8 Hrs

3.1 Types of retail locations

3.2 Methods of site selection

3.3 Principles of retail site selection

4. RETAIL PURCHASING 8 Hrs

4.1 Product structure and sourcing

4.2 Retail purchasing process

4.3 Considerations in retail purchasing

5. RETAIL PRICING 8 Hrs

5.1 Factors affecting retail pricing

5.2 Cost-plus pricing method

5.3 Competition-based pricing method

5.4 Demand-based pricing method

5.5 Psychological pricing

5.6 Subscription-based pricing models

5.7 Pricing strategies in omnichannel retail

6. RETAIL PROMOTION **8 Hrs**

6.1 Meaning and characteristics of retail promotions

6.2 Objectives of retail promotions

6.3 Methods of retail promotion

6.4 Digital marketing strategies

6.4.1 Influencer marketing

6.4.2 AI personalized marketing

6.4.3 Social media event marketing

6.5 Augmented reality and gamified marketing

7. RETAIL SERVICES **8 Hrs**

7.1 Connotation of retail services

7.2 Content of retail services

7.3 Retail service process

8. RETAIL MANAGEMENT **8 Hrs**

8.1 Content of retail management

8.2 Retail business management models

8.3 Common digital tools

EC-123 RETAIL FUNDAMENTALS

INSTRUCTIONAL OBJECTIVES

1. RETAIL AWARENESS

1.1 Understand the meaning of retail and the retail industry

1.2 Familiarize with the current state of the retail industry

1.3 Master the trends in retail development

2. RETAIL FORMATS

2.1 Master the characteristics of retail formats

2.2 Familiarize with the main types of retail formats

3. RETAIL SITE SELECTION

3.1 Understand the types of retail site selection

3.2 Master the methods of retail site selection

3.3 Master the principles of market retail site selection

4. RETAIL PURCHASING

4.1 Understand product structure and sourcing

4.2 Familiarize with the general process of purchasing

4.3 Master the considerations in retail purchasing

5. RETAIL PRICING

5.1 Understand the factors that affect retail pricing

5.2 Master cost-plus pricing method

5.3 Familiarize with competition-based pricing methods

5.4 Master demand-based pricing methods

5.5 Familiarize with psychological pricing methods

5.6 Understand subscription-based pricing models

5.7 Familiarize with pricing strategies in omnichannel retail

6. RETAIL PROMOTION STRATEGIES

6.1 Understand the meaning and characteristics of retail promotions

6.2 Familiarize with the objectives of retail promotions

6.3 Master the methods of retail promotions

6.4 Master digital marketing strategies

6.5 Understand augmented reality and gamified marketing

7. RETAIL SERVICES

7.1 Understand the connotation of retail services

7.2 Master the content of retail services

7.3 Familiarize with the process of retail services

8. MASTERING RETAIL MANAGEMENT

8.1 Understand the content of retail management

8.2 Familiarize with retail business management models

8.3 Familiarize with common digital tools

EC-123 RETAIL FUNDAMENTALS

LIST OF PRACTICALS **96 Hrs**

1. Research on the development of the retail industry
2. Analysis of the evolution of the retail sector
3. Analysis of retail formats
4. Target market analysis
5. Commercial area environment analysis
6. Target audience analysis
7. Retail store site selection
8. Product planning and management
9. Cost-oriented pricing
10. Demand-oriented pricing
11. Supplier selection and evaluation
12. Formulation of retail promotion strategies
13. Handling of product returns and exchanges
14. Research on retail service standards
15. Customer complaint handling

EC-132 DATA COLLECTION AND PROCESSING

Total Contact Hours

		T	P	C
Theory	32 Hrs			
Practical	96 Hrs	**1**	**3**	**2**

LEARNING OUTCOMES: This course is designed to comprehensively develop students' capabilities in the fundamentals of data, including collection, cleaning, processing, storage, management, and security. It aims to equip students with the core knowledge and skills of data science. Through the study and practical application of data collection and processing, students will be able to use data analysis tools to gather and process data, thereby uncovering patterns and trends behind the data to provide robust support for decision-making.

COURSE CONTENTS

1. DATA COLLECTION AND PROCESSING AWARENESS 2 Hrs

1.1 Concept and characteristics of data

1.2 Types of data

1.3 The role of data collection and processing

2. DATA COLLECTION 6 Hrs

2.1 Basic principles of data collection

2.2 Steps in data collection

2.3 API data collection methods

2.4 Web scraping data collection methods

2.5 IoT data collection methods

2.6 Legal regulations related to data collection (GDPR, CCPA)

3. DATA CLEANING 6 Hrs

3.1 Meaning of data cleaning

3.2 Main types of data cleaning

3.3 Methods for cleaning duplicate data

3.4 Methods for cleaning missing data

3.5 Methods for cleaning incorrect data

3.6 Common data cleaning tools

4. DATA INTEGRATION 4 Hrs

4.1 Meaning of data integration

4.2 Types of data integration

4.3 Methods of data integration

4.4 Data integration process

4.5 Tools for data integration

5. DATA TRANSFORMATION 6 Hrs

5.1 Meaning of data transformation

5.2 Main aspects of data transformation

5.3 Methods for data standardization

5.4 Methods for data discretization

5.5 Methods for data normalization

5.6 Modern data transformation technologies

6. DATA STORAGE 4 Hrs

6.1 Meaning and types of data storage

6.2 Methods of data storage

6.2.1 Cloud storage

6.2.2 Distributed storage

6.2.3 Data lakes and data warehouses

6.3 Forms of data storage

6.4 Basic operations of databases

7. DATA PROTECTION 4 Hrs

7.1 Meaning of data protection

7.2 Principles of data protection

7.3 Methods of data protection

7.4 Compliance and regulations in data protection

EC-132 DATA COLLECTION AND PROCESSING

INSTRUCTIONAL OBJECTIVES

1. DATA COLLECTION AND PROCESSING AWARENESS

1.1 Understand the meaning and function of data

1.2 Familiarize with the basic characteristics of data

1.3 Master the role of data collection and processing

1.4 Understand the application of data in different fields

2. DATA COLLECTION

2.1 Familiarize with the basic principles of data collection

2.2 Understand the steps in data collection

2.3 Understand API data collection methods

2.4 Master web scraping data collection methods

2.5 Understand IoT data collection methods

2.6 Master legal regulations related to data collection (GDPR, CCPA)

3. DATA CLEANING

3.1 Understand the meaning of data cleaning

3.2 Familiarize with the main types of data cleaning

3.3 Master methods for cleaning duplicate data

3.4 Master methods for cleaning missing data

3.5 Master methods for cleaning incorrect data

3.6 Familiarize with common data cleaning tools

4. DATA INTEGRATION

4.1 Understand the meaning of data integration

4.2 Familiarize with the types of data integration

4.3 Master methods of data integration

4.4 Familiarize with the process of data integration

4.5 Familiarize with common tools for data integration

5. DATA TRANSFORMATION

5.1 Understand the meaning of data transformation

5.2 Familiarize with the main contents of data transformation

5.3 Master methods for data standardization

5.4 Master methods for data discretization

5.5 Master methods for data normalization

5.6 Understand modern data transformation technologies

6. DATA STORAGE

6.1 Familiarize with the meaning and types of data storage

6.2 Master methods of data storage

6.3 Understand the forms of data storage

6.4 Master basic operations of databases

7. DATA PROTECTION

7.1 Understand the meaning of data protection

7.2 Familiarize with the principles of data protection

7.3 Master methods of data protection

7.4 Familiarize with legal regulations related to data security

EC-132 DATA COLLECTION AND PROCESSING

LIST OF PRACTICALS **96 Hrs**

1. Data type identification
2. Data collection tool selection
3. Market data collection
4. Product data collection
5. E-commerce data collection
6. Customer data collection
7. Data consistency check
8. Duplicate data cleaning
9. Missing data cleaning
10. Incorrect data cleaning
11. Data extraction
12. Data transformation
13. Data loading
14. Data association
15. Data format conversion
16. Data normalization
17. Data standardization
18. Data storage
19. Research data security laws and regulations
20. Analyze typical data security cases

EC-143 PRODUCT PHOTOGRAPHY AND MATERIAL EDITING

Total Contact Hours

		T	P	C
Theory	32 Hrs			
Practical	192 Hrs	**1**	**6**	**3**

LEARNING OUTCOMES: This course is centered around the workflow of online store product photographers, covering all aspects from basic theory to practical operations. The course content includes skills using various photography tools such as smartphones and DSLR cameras, as well as key skills in shooting, editing, and post-processing of images and video materials. Through this course, students will acquire professional photography knowledge necessary for displaying products in online stores, enhance their shooting and editing capabilities, and thus produce high-quality visual content that attracts customers in the e-commerce field.

COURSE CONTENTS

1. PRODUCT PHOTOGRAPHY AND MATERIAL EDITING AWARENESS

4 Hrs

1.1 Purpose of product photography and material editing

1.2 Requirements for product image photography

1.3 Requirements for product video shooting

1.4 Professional ethics in product photography and material editing

1.5 Requirements for product photography across different e-commerce platforms

2. PRODUCT IMAGE PHOTOGRAPHY 6 Hrs

2.1 Product photo shoot settings and lighting

2.2 Equipment and tools for product image photography

2.3 Process of product image photography

2.4 Application of new technologies in product image photography

3. PRODUCT IMAGE EDITING 8 Hrs

3.1 Introduction to product image editing software

3.1.1 Introduction to Adobe Photoshop

3.1.2 Introduction to Canva

3.1.3 Introduction to Fotor

3.2 Technical aspects of product image editing

3.2.1 Basic image adjustments

3.2.2 Background processing

3.2.3 Image detail enhancement

3.2.4 Image compositing

3.3 Application scenarios for product image editing

4. PRODUCT VIDEO SHOOTING 6 Hrs

4.1 Basic process of product video shooting

4.2 Video formats and resolutions

4.3 Camera language and composition

4.4 Equipment for product video shooting

4.5 Techniques for product video shooting

4.6 Applications of product video shooting

4.6.1 Video shooting for e-commerce platforms

4.6.2 Video shooting for social media

4.7 Precautions for product video shooting

5. PRODUCT VIDEO EDITING 8 Hrs

5.1 Introduction to video editing software

5.1.1 Introduction to DaVinci Resolve

5.1.2 Introduction to Final Cut Pro

5.1.3 Introduction to Adobe Premiere Pro

5.2 Process of product video editing

5.3 Techniques in product video editing

5.3.1 Motion tracking

5.3.2 Color correction

5.3.3 Adding subtitles

5.3.4 Effects and transitions

5.4 Video requirements for different platforms

EC-143 PRODUCT PHOTOGRAPHY AND MATERIAL

INSTRUCTIONAL OBJECTIVES

1. PRODUCT PHOTOGRAPHY AWARENESS

1.1 Understand the purpose of product photography and material editing

1.2 Master the requirements for product image photography

1.3 Master the requirements for product video shooting

1.4 Familiarize with the professional ethics of product photography and material editing

1.5 Familiarize with the product photography requirements of different e-commerce platforms

2. PRODUCT IMAGE PHOTOGRAPHY

2.1 Master the settings and lighting for product image photography

2.2 Familiarize with the equipment and tools for product image photography

2.3 Understand the process of product image photography

2.4 Familiarize with new technologies related to product image photography

3. PRODUCT IMAGE EDITING

3.1 Familiarize with the functions of common image editing software

3.2 Master the technical aspects of product image editing

3.3 Understand the application scenarios for product image editing

4. PRODUCT VIDEO SHOOTING

4.1 Understand the basic process of product video shooting

4.2 Understand video formats and resolutions

4.3 Master camera language and composition

4.4 Familiarize with product video shooting equipment

4.5 Master product video shooting techniques

4.6 Familiarize with the applications of product video shooting

4.7 Master the precautions for product video shooting

5. PRODUCT VIDEO EDITING

5.1 Familiarize with the functions of common video editing software

5.2 Understand the process of product video editing

5.3 Master the techniques of product video editing

5.4 Familiarize with video requirements for different platforms

EC-143 PRODUCT PHOTOGRAPHY AND MATERIAL

LIST OF PRACTICALS **192 Hrs**

1. Selection of product image photography equipment
2. Setup of product image photography scenes
3. Product image photography for household goods
4. Product image photography for sports and outdoor goods
5. Product image photography for digital and electronic goods
6. Product image photography for snack and leisure goods
7. Product image photography for clothing and apparel
8. Product image photography for fashion accessories
9. Image cropping for household goods
10. Background removal for sports and outdoor goods images
11. Filter application for digital and electronic goods images
12. Color adjustment for snack and leisure goods images
13. Text addition to fashion accessories images
14. Selection of product video shooting equipment
15. Selection of product video shooting scenes
16. Product video shooting for household goods
17. Product video shooting for sports and outdoor goods
18. Product video shooting for digital and electronic goods
19. Product video shooting for snack and leisure goods
20. Product video shooting for clothing and apparel
21. Product video shooting for fashion accessories
22. Video splicing for household goods
23. Background music addition to sports and outdoor goods videos
24. Subtitle addition to digital and electronic goods videos
25. Transition effects for snack and leisure goods videos
26. Sound effects for clothing and apparel videos
27. Filter application for fashion accessories videos

Gen-201 ISLAMIAT AND PAK STUDIES

YEAR 2

اسلامیات/مطالعہ پاکستان

نصاب سال دوئم GEN201

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1	0	1

حصہ اول اسلامیات

حصہ دوئم مطالعہ پاکستان

کل وقت 20 گھنٹے:

موضوعات:

1۔ سورۃ المومنون ایک تا گیارہ آیات کا ترجمہ مع تشریح

2۔ دس منتخب احادیث مع ترجمہ وتشریح

() خیر کم من تعلم القرآن و علمه

() لا ایمان لمن لا امانته له ولا دین لا من لا اعهد له

() و یاکم والظن ان الظن اکرب الحدیث

() من احدث فی امرنا هذا ما لیس منه فهورد

() من حمل علینا السلاح فلیس منا

() انا و کافل الیتیم فی الجنه

() لا ضرور ولا ضرار فی السلام

() کلکم راع و کلکم راع و کلکم مسول عن رعیته

3۔ سیرۃ طیبہ

() مکی زندگی۔ولادت۔بعثت۔ہجرت

() مدنی زندگی۔مواخات۔میثاق مدینہ۔فتح مکہ(اسباب ونتائج)

4۔ حضورﷺ بحیثیت

() خطبہ حجۃ الوداع۔انسانی حقوق کا اعلامیہ/حقوق انسانی پالیسی 2018

() معلم کامل۔سربراہ خاندان

5۔ اسلامی معاشرہ

نظام تعلیم اور اس کے مقاصد۔عدل وانصاف۔امر بالمعروف۔نہی عن المنکر۔انسانی حقوق کا معاشرتی اور معاشی ترقی میں کردار

جہاد۔کسب حلال۔مسجد(اہمیت وفضیلت)

6۔ اسلامی ریاست کی تعریف۔اسلامی ریاست کی خصوصیات۔اسلامی حکومت کے فرائض۔اسلامی طرز حکومت۔

حقوق آگاہی رمعلومات تک رسائی

۔ملازم پیشہ خواتین کا تحفظ

تدریس مقاصد:

عمومی مقاصد: طالب علم یہ جان سکے کہ آیات قرآنی کی روشنی میں مومن کے اوصاف کیا ہیں

() قرآن مجید () منتخب آیات قرآنی

خصوصی مقاصد:

() قرآنی آیات کا ترجمہ

() قرآنی آیات کی تشریح

() قرآنی آیات کی روشنی میں ایک مومن کے اوصاف بیان کر سکے

() قرآنی آیات میں بیان کردہ مومن کے اوصاف اپنے اندر پیدا کر سکے

احادیث نبوی:

عمومی مقاصد:

() احادیث کی روشنی میں اسلامی اخلاقی اقدار (انفرادی واجتماعی) سے آگاہ ہو سکے

خصوصی مقاصد:

() احادیث کا ترجمہ بیان کر سکے

() احادیث کی تشریح کر سکے

() احادیث کی روشنی میں اسلام کی اخلاقی اقدار کی وضاحت کر سکے

() احادیث کی دی گئی تعلیمات کے مطابق اپنی زندگی گزار سکے

سیرت طیبہ:

() عمومی مقاصد: حضورﷺ کی سیرت طیبہ کے بارے میں جان سکے

خصوصی مقاصد:

() حضورﷺ کی ابتدائی زندگی اختصار کے ساتھ بیان کر سکے

() حضورﷺ کی ہجرت کا واقع بیان کر سکے

() حضورﷺ کی مدنی زندگی اختصار سے بیان کر سکے

() حضورﷺ کی بطور معلم خصوصیات بیان کر سکے

() حضور ﷺ کی بطور سربراہ بیان کر سکے

حضور ﷺ بحیثیت

() خطبہ حجۃ الوداع۔ انسانی حقوق کا اعلامیہ حقوق انسانی پالیسی 2018 کے بارے جان سکے

اسلامی معاشرہ:

عمومی مقاصد: اسلامی معاشرہ کی خصوصیات سے آگاہی حاصل کر سکے

خصوصی مقاصد:

() اسلامی معاشرہ کا معنی و مفہوم کر سکے

() اسلامی معاشرہ کی امتیازی خصوصیات بیان کر سکے

() اسلامی معاشرہ میں عدل و احسان کی اہمیت بیان کر سکے

() تبلیغ کے لغوی معنی بیان کر سکے

() تبلیغ کی اہمیت اور ضرورت بیان کر سکے

() جہاد کے لفظی و اصطلاحی معنی بیان کر سکے

() جہاد کی اہمیت بیان کر سکے

() جہاد اور قتل میں فرق بیان کر سکے

() جہاد کی مختلف اقسام بیان کر سکے

() لفظ مسجد کی تعریف بیان کر سکے

() مسجد کی سابقہ حیثیت کو بحال کرنے کے بارے میں اقدامات کو مان سکے

() انسانی حقوق کی معاشی اور معاشرتی ترقی میں اہمیت اور کردار بیان کر سکے

اسلامی ریاست:

عمومی مقاصد:

() اسلامی ریاست کی خصوصیات بیان کر سکے

خصوصی مقاصد:

() ریاست کی تعریف بیان کر سکے

() اسلامی ریاست میں طرز حکومت سے آگاہی حاصل کر سکے

() اسلامی ریاست کی خصوصیات بیان کر سکے

( ) اسلامی ریاست کے اغراض و مقاصد بیان کر سکے
( ) اسلامی ریاست کے قیام کی لیے جدو جہد کر سکے
( ) حقوق آگاہی رمعلومات تک رسائی کا قانون جان سکے
( ) ملازمت پیشہ خواتین کے حقوق کا تحفظ جان سکے اور
( ) معاشرے میں خواتین کے حقوق کا تحفظ یقینی بنائے

نصاب مطالعہ پاکستان

سال دوئم

حصہ دوم

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1	0	1

کل وقت 12 گھنٹے

موضوعات:

() دوقومی نظریہ

() تحریک پاکستان

() انڈین کانگریس

() مسلم لیگ

() تقسیم بنگال

() میثاق لکھنو

() تحریک خلافت

() سندھو تحریک

() تجاویز دہلی

() نہرو رپورٹ

() قائداعظم کے چودہ نکات

() خطبہ آلہ آباد

() انتخابات 1938 اور انتقال اقتدار

() قرارداد پاکستان

حصہ دوم

مطالعہ پاکستان

تدریس مقاصد:

تحریک پاکستان:

عمومی مقاصد:

() قیام پاکستان کے اسباب وتحریک کو بیان کر سکے

خصوصی مقاصد:

() قومیت کے مفہوم کو بیان کر سکے

() دو قومی نظریہ کی تعریف وتوضیح کر سکے

() دوقومی نظریہ کی اہمیت بیان کر سکے

() ہندوستانی مسلمانوں کی محرومیوں کو بیان کر سکے

() قومی تشخص کو بحال رکھنے کے لیے مسلمانان ہند کی مساعی بیان کر سکے

() آزادی ہند اور قیام پاکستان علامہ اقبال اور قائداعظم کی مساعی بیان کریں

() قیام پاکستان سے مستقبل اسلامی مملکت کے قیام کے لیے مسلم عوام کی کوششوں کو بیان کر سکے

() مسلم لیگ کے قیام پاکستان کے لیے جدو جہد بیان کر سکے

نصاب اخلاقیات

سال دوم

تدریس مقاصد:

طالب علم اخلاقیات کی اہمیت وضرورت سے آگاہ ہو سکے اور بیان کر سکے

خصوصی مقاصد: طالب علم اس قابل ہو کہ

() موضوعات کا مطلب بیان کر سکے

() عملی زندگی سے مثالوں کی نشاندہی کر سکے

() اپنی شخصیت اور معاشرے پر موضوعات کے مطابق اثرات پیدا کرنے کے طریقے بیان کر سکے

() اعلیٰ اخلاقی اقدار میں سے قوت برداشت۔قوت ارادی۔لگن وجذبہ۔وسیع النظری۔بے غرض۔انسانی دوستی شعور۔پاس آزادی۔کامل آگاہی اور خودشناسی کی اہمیت

() اخلاقیات سے متصف ہو کر قومی خدمت بہتر طور پر انجام دے سکے

() انسانی حقوق کا اعلامیہ/حقوق انسانی کی پالیسی 2018 کے بارے میں جان سکے

() انسانی حقوق کا معاشرتی اور معاشی ترقی میں اہمیت اور کردار بیان کر سکے

() حقوق اگاہی/معلومات تک رسائی کے قانون کو جان سکے

() ملازم پیشہ خواتین کا تحفظ کو اخلاقیات کا حصہ تصور کرے

TTQ/ Civic- 211 TARJAMA TUL QURAN / CIVIC-211

Theory	**32**	**T**	**P**	**C**
Practical	**0**	**1**	**0**	**1**

Note: Syllabi for these subject would be as per BISEs / General education, developed by Punjab Curriculum TextBook Board (PCTB)

Math-212 APPLIED MATHEMATICS-II

Total Contact Hours	**T**	**P**	**C**
Theory: 64 Hrs	**2**	**0**	**2**

LEARNING OUTCOMES:

After completing the course the students will be able to:Solve the problems of calculus and analytical Geometry.

COURSE CONTENTS

1. FUNCTIONS & LIMITS. 4 Hrs

1.1 Constants and variables

1.2 Functions & their types

1.3 The concept of limit

1.4 Limit of a function

1.5 Fundamental theorems on limit

1.6 Some important limits

1.7 Problems

2. DIFFERENTIATION. 4 Hrs

2.1 Increments

2.2 Different Coefficient or Derivative

2.3 Differentiation ab-initio or by first principle

2.4 Geometrical Interpretation of Differential Coefficient

2.5 Differential Coefficient of Xa, (ax + b)a

2.6 Three important rules

2.7 Problems.

3. DIFFERENTIATION OF ALGEBRAIC FUNCTION 4Hrs

3.1 Explicit function

3.2 Implicit function

3.3 Parametric forms

3.4 Problems

4. DIFFERENTIATION OF TRIGNOMETRIC FUNCTION. 4 Hrs

4.1 Differential coefficient of sin x ,cos x ,tang x from first principle.

4.2 Differential coefficient of Cosec x, Sec x, Cot x.

4.3 Differentiation of inverse trigonometric function.

4.4 Problems.

5. DIFFERENTIATION OF LOGARITHIMIC & EXPONENTIAL FUNCTION. 4 Hrs

5.1 Differentiation of In x

5.2 Differentiation of log ax

5.3 Differentiation of ax

5.4 Differentiation of ex 66

5.5 Problems.

6. RATE OF CHANGE OF VARIABLE. 4 Hrs

6.1 Increasing and decreasing function

6.2 Maxima and minima values

6.3 Criteria for maximum and minimum values.

6.4 Method of finding maxima and minima.

6.5 Problems.

7. INTEGRATION. 8 Hrs

7.1 Concept

7.2 Fundamental formulas

7.3 Important rules

7.4 Problems.

8. METHOD FOR INTEGRATION. 6 Hrs

8.1 Integration by substitution

8.2 Integration by parts

8.3 Problems.

9. DEFINITE INTEGRALS. 6 Hrs

9.1 Properties

9.2 Application to Area

9.3 Problems

10. PLANE ANALYTIC GEOMETRY & STRAIGHT LINE. 6 Hrs

10.1 Coordinate System

10.2 Distance Formula

10.3 The Ratio Formulas

10.4 Inclination and slope of a line

10.5 The Slope Formula

10.6 Problems.

11. EQUATION OF STRAIGHT LINE. 6 Hrs

11.1 Some Important Forms

11.2 General form

11.3 Angle formula

11.4 Parallelism and perpendicularity

11.5 Problems

12. THE EQUATION OF THE CIRCLE. 8 Hrs

12.1 Standard form of equation

12.2 Central form of equation

12.3 General form of equation

12.4 Radius & coordinate of the Centre

12.5 Problems

REFERENCE BOOKS

1. A Text Book of Applied Mathematics (Math-212) of TEVTA, published by National Book Foundation (NBF)

Math-212 APPLIED MATHEMATICS-II

INSTRUCTIONAL OBJECTIVES

1. USE THE CONCEPT OF FUNCTION AND THEIR LIMITS IN SOLVING SIMPLE PROBLEMS

1.1 Define a function

1.2 List all types of function

1.3 Explain the concept of limit and limit of a function

1.4 Explain fundamental theorem on limits

1.5 Derive some important limits

1.6 Solve simple problems on limits

2. UNDERSTAND THE CONCEPT OF DIFFERENTIAL COEFFICIENT

2.1 Derive mathematics expression for a differential coefficient.

2.2 Explain geometrical interpretation of different ional coefficient.

2.3 Differentiate a content, constant associated with a variable and the sum of finite number of function.

2.4 Solved related problems.

3. USE RULES OF DIFFERENTIAL TO SOLVE PROBLEMS OF ALGEBRAIC FUNCTIONS.

3.1 Differentiate ab-initio Xn and (ax+b)n

3.2 Derive product, quotient and chain rules.

3.3 Find derivative of implicit function & explicit function.

3.4 Differentiate parametric forms; function w.r.t another function and by rationalization.

3.5 Solve problems using these formulas.

4. USE RULES OF DIFFERENTIATION TO SOLVE PROBLEMS OF ALGEBRAIC FUNCTIONS.

4.1 Differentiate from first principle sin x ,cosx,tang x.

4.2 Derive formula for derivation of sec x,cosec x, cot x.

4.3 Find differential coefficient of inverse trigonometric functions.

5. USE RULES OF DIFFERENTIATION TO LOGARITHMIC AND EXPONENTIAL FUNCTIONS.

5.1 Derive formulas for differential coefficient of logarithmic and exponential functions.

5.2 Solve problems using these formulas.

6. UNDERSTAND RATE OF CHANGE OF ONE VARRIABLE WITH RESPECT TO ANOTHER.

6.1 Write expression for velocity, acceleration, and slope of a line.

6.2 Define an increasing and decreasing function, maxima and minima values, of inflection.

6.3 Explain criteria for maxima and minima values of a function.

6.4 Solve problems involving rate of change of variables.

7. APPLY CONCEPT OF INTEGRATION IN SOLVING TECHNOLOGICAL PROBLEMS

7.1 Explain the concept of integration

7.2 Write basic theorem of integration

7.3 List some important rules of integration

7.4 Derive fundamental formulas of integration

7.5 Solve problems based on these formulas /rules.

8. UNDERSTAND DIFFERENT METHODS OF INTEGRATION.

8.1 List standard formulas

8.2 Integrate a function by substitution method

8.3 Find integrals by the method of integration by parts

8.4 Solve problems using these methods.

9. UNDERSTAND THE METHOD OF SOLVING DEFENITE INTEGRALS.

9.1 Define definite integral

9.2 List properties of definite integrals using definite integrals.

9.3 Find areas under curves

9.4 Solve problems of definite integrals.

10. UNDERSTAND THE CONCEPT OF PLANE ANALYTIC GEOMETRY.

10.1 Explain the rectangular coordinate system

10.2 Locate points in different quadrants

10.3 Derive distance formula

10.4 Prove section formula

10.5 Derive slope formula

10.6 Solve problems using the above formulas.

11. USE EQUATIONS OF STRAIGHT LINE IN SOLVING PROBLEMS.

11.1 Define a straight line

11.2 State general form of equation of a straight line

11.3 Derive slope intercept and intercept forms of equations.

11.4 Derive expression for angle between two straight lines

11.5 Derives conditions of perpendicularity and parallelism lines

11.6 Solve problems involving these equations/formulas.

12. SOLVE TECHNOLOGICAL PROBLEMS USING EQUATION OF CIRCLE.

12.1 Define a circle

12.2 Describe standards, central and general forms of the equation of a circle.

12.3 Convert general forms to the central forms of equation of a circle.

12.4 Deduce formulas for the radius and the coordinates of the centre of a circle from the general form.

12.5 Derive equation of the circle passing through three given points.

12.6 Solve problems involving these equations

EC-212 E-COMMERCE LAWS AND REGULATIONS

Total Contact Hours	**T**	**P**	**C**
Theory 64 Hrs	**2**	**0**	**2**

LEARNING OUTCOMES: This course adopts a case-based teaching approach to explore the core elements of e-commerce laws and regulations. Topics include the legal status of e-commerce participants, formation and validity of electronic contracts, security and legality of electronic signatures and authentication, standardized procedures for electronic payments, tax treatment in e-commerce activities, data protection and cybersecurity, intellectual property protection in the online business environment, maintaining order in the e-commerce market, and methods for resolving e-commerce disputes. Through systematic learning of these topics, the course aims to enhance students' understanding and application of e-commerce legal knowledge, and develop their ability to solve practical problems.

COURSE CONTENTS

1. E-COMMERCE LAWS AND REGULATIONS AWARENESS 4 Hrs

1.1 Concept, characteristics, and role of e-commerce law

1.2 Scope and subjects governed by e-commerce law

1.3 Legal relationships in e-commerce

1.4 Overview of e-commerce legislation

2. LEGAL SYSTEM FOR E-COMMERCE ENTITIES 8 Hrs

2.1 Overview of e-commerce entities

2.2 Legal system for website establishment

2.3 Laws and regulations for e-commerce platforms

2.4 Legal system for gig economy platforms

2.5 Legal system for digital service providers

3. LEGAL SYSTEM FOR ELECTRONIC CONTRACTS 8 Hrs

3.1 Concept, features, and types of electronic contracts

3.2 Procedures for the formation of electronic contracts

3.3 Principles of performance in electronic contracts

3.4 Methods of performance in electronic contracts

3.5 Concept and features of smart contracts

3.6 Legal implications of smart contracts

4. LEGAL SYSTEM FOR ELECTRONIC SIGNATURES AND AUTHENTICATION 8 Hrs

4.1 Legal definition and characteristics of electronic signatures

4.2 Concept and function of electronic authentication

4.3 Conditions for the establishment of authentication institutions

4.4 Basic regulations for electronic authentication activities

5. LEGAL SYSTEM FOR ELECTRONIC PAYMENTS 8 Hrs

5.1 Concept and features of electronic payments

5.2 Validity of online payment tools

5.3 Overview of payment legislation

5.4 Characteristics and usage regulations of electronic payment tools

5.4.1 Cryptocurrency payment systems and decentralized finance (DeFi) systems

5.4.2 Digital wallets

5.4.3 Buy Now, Pay Later systems

6. LEGAL SYSTEM FOR E-COMMERCE TAXATION 8 Hrs

6.1 E-commerce taxation policies

6.2 Basic principles of e-commerce taxation

6.3 Impact of e-commerce development on taxation

6.4 Solutions to tax-related issues in e-commerce

7. LEGAL SYSTEM FOR INTELLECTUAL PROPERTY IN E-COMMERCE 4 Hrs

7.1 Concept, characteristics, and types of intellectual property

7.2 Legal protection of copyright, trademark, and patent in e-commerce

7.3 Legal regulations and protection related to domain names

8. LEGAL REGULATIONS FOR E-COMMERCE MARKET ORDER 4 Hrs

8.1 Concept, characteristics, and types of e-commerce entities

8.2 Market access standards for e-commerce

8.3 Anti-monopoly legal regulations in the e-commerce sector

8.4 Consumer rights protection in e-commerce

9. LEGAL SYSTEM FOR E-COMMERCE SECURITY 8 Hrs

9.1 Contents of e-commerce security

9.2 Key elements of e-commerce security

9.3 Legal regulations for e-commerce security

9.4 Supervisory and regulatory bodies for e-commerce security

10. E-COMMERCE DISPUTE RESOLUTION MECHANISMS 4 Hrs

10.1 Rules of jurisdiction in commercial disputes

10.2 Challenges in determining jurisdiction in the e-commerce environment

10.3 Concept and types of legal liability

10.4 Characteristics of legal liability in e-commerce activities

10.5 Introduction to online dispute resolution platforms

EC-212 E-COMMERCE LAWS AND REGULATIONS

INSTRUCTIONAL OBJECTIVES

1. E-COMMERCE LAWS AND REGULATIONS AWARENESS

1.1 Familiarize with the concept, characteristics, and role of e-commerce law

1.2 Master the subjects and scope governed by e-commerce law

1.3 Familiarize with the legal relationships in e-commerce

1.4 Understand the legislative overview of e-commerce

2. LEGAL SYSTEM FOR E-COMMERCE ENTITIES

2.1 Understand the meaning and types of e-commerce entities

2.2 Master the legal system for website establishment

2.3 Master the laws and regulations for e-commerce platforms

2.4 Familiarize with the legal system for gig economy platforms

2.5 Understand the legal system for digital service providers

3. LEGAL SYSTEM FOR ELECTRONIC CONTRACTS

3.1 Familiarize with the concept, characteristics, and types of electronic contracts

3.2 Master the procedures for forming electronic contracts

3.3 Understand the principles of performance for electronic contracts

3.4 Master the methods for performing electronic contracts

3.5 Familiarize with the legal impact of smart contracts

4. LEGAL SYSTEM FOR ELECTRONIC SIGNATURES AND AUTHENTICATION

4.1 Familiarize with the legal definition and characteristics of electronic signatures

4.2 Master the meaning and role of electronic authentication

4.3 Familiarize with the conditions for establishing authentication institutions

4.4 Understand the basic regulations for electronic authentication activities

5. LEGAL SYSTEM FOR ELECTRONIC PAYMENTS

5.1 Familiarize with the concept and features of electronic payments

5.2 Understand the validity of online payment tools

5.3 Familiarize with payment legislation overview

5.4 Master the characteristics and usage regulations of electronic payment tools

6. LEGAL SYSTEM FOR E-COMMERCE TAXATION

6.1 Familiarize with e-commerce taxation policies

6.2 Master the basic principles of e-commerce taxation

6.3 Understand the impact of e-commerce development on taxation

6.4 Master strategies for handling tax-related issues in e-commerce

7. LEGAL SYSTEM FOR INTELLECTUAL PROPERTY IN E-COMMERCE

7.1 Familiarize with the concept, characteristics, and types of intellectual property

7.2 Understand the legal protection of copyright, trademark, and patent in e-commerce

7.3 Familiarize with legal regulations and protection regarding domain names

8. LEGAL REGULATIONS FOR E-COMMERCE MARKET ORDER

8.1 Familiarize with the concept, characteristics, and types of e-commerce entities

8.2 Master the market access standards for e-commerce

8.3 Understand the legal regulations for anti-monopoly in the e-commerce sector

8.4 Familiarize with consumer rights protection in e-commerce

8.5 Understand Data Portability Rights and their enforcement

9. LEGAL SYSTEM FOR E-COMMERCE SECURITY

9.1 Understand the content of e-commerce security

9.2 Master the elements of e-commerce security

9.3 Familiarize with the legal regulations for e-commerce security

9.4 Understand the supervisory and regulatory bodies for e-commerce security

9.5 Understand ransomware attack methods and defense measures

9.6 Understand AI-based fraud detection and supply chain security

10. E-COMMERCE DISPUTE RESOLUTION MECHANISMS

10.1 Understand the rules of jurisdiction in commercial disputes

10.2 Familiarize with issues in determining jurisdiction in the e-commerce environment

10.3 Master the concept and types of legal liability

10.4 Understand the characteristics of legal liability in e-commerce activities

10.5 Understand the role of online dispute resolution platforms in e-commerce

EC-222 DATA VISUALIZATION

Total Contact Hours

		T	P	C
Theory	32 Hrs			
Practical	96 Hrs	**1**	**3**	**2**

LEARNING OUTCOMES: This course focuses on the comprehensive development of data visualization skills, covering everything from basic understanding to advanced applications. It includes data preparation, processing, and visualization techniques for various types of data (e.g., categorical, relational, proportional, time series, spatial). Combining theory with practice, the course aims to enhance students' data insight and visual storytelling abilities. By the end of the course, students will be proficient in using multiple tools and techniques to create efficient and visually impactful data visualizations, providing solid support for data-driven decision-making.

COURSE CONTENTS

1. DATA VISUALIZATION AWARENESS 4 Hrs

1.1 Definition and advantages of data visualization

1.2 Basic types of data visualization graphics

1.3 Common tools for data visualization

2. DATA PREPARATION AND PROCESSING 4 Hrs

2.1 Basic knowledge of data source connections

2.2 Methods for data cleaning

2.3 Methods for data type conversion

2.4 Methods for data transposition

3. CATEGORICAL DATA VISUALIZATION 4 Hrs

3.1 Visualizing simple categorical data

3.2 Visualizing combined categorical data

3.3 Visualizing advanced categorical data

4. RELATIONAL DATA VISUALIZATION 4 Hrs

4.1 Visualizing variable relationships

4.2 Visualizing flow relationships

5. PROPORTIONAL DATA VISUALIZATION 4 Hrs

5.1 Visualizing parts-to-whole relationships

5.2 Visualizing comparative differences

5.3 Visualizing cumulative processes

6. TIME SERIES DATA VISUALIZATION 4 Hrs

6.1 Visualizing simple time series data

6.2 Visualizing combined time series data

6.3 Visualizing advanced time series data

7. SPATIAL LOCATION DATA VISUALIZATION 4 Hrs

7.1 Visualizing simple spatial location data

7.2 Visualizing combined spatial location data

7.3 Visualizing advanced spatial location data

8. COMPREHENSIVE APPLICATION OF DATA VISUALIZATION 4 Hrs

8.1 Content of visualization dashboards

8.2 Key points for creating visualization dashboards

8.3 Content of data visualization reports

8.4 Writing techniques for data visualization reports

EC-222 DATA VISUALIZATION

INSTRUCTIONAL OBJECTIVES

1. DATA VISUALIZATION AWARENESS

1.1 Understand the definition and advantages of data visualization

1.2 Familiarize with basic graphical forms of data visualization

1.3 Familiarize with common tools for data visualization

2. DATA PREPARATION AND PROCESSING

2.1 Master the methods of data source integration

2.2 Master the methods of data cleaning

2.3 Master the methods of data type conversion

2.4 Master the methods of data transposition

3. CATEGORICAL DATA VISUALIZATION

3.1 Master simple categorical data visualization charts

3.2 Master combined categorical data visualization charts

3.3 Master advanced categorical data visualization charts

4. RELATIONAL DATA VISUALIZATION

4.1 Master visualizations that show variable relationships

4.2 Master visualizations that show flow relationships

5. PROPORTIONAL DATA VISUALIZATION

5.1 Master visualizations that show parts-to-whole relationships

5.2 Master visualizations that show comparative differences

5.3 Master visualizations that show cumulative processes

6. TIME SERIES DATA VISUALIZATION

6.1 Master simple time series data visualization charts

6.2 Master combined time series data visualization charts

6.3 Master advanced time series data visualization charts

7. SPATIAL LOCATION DATA VISUALIZATION

7.1 Master simple spatial location data visualization charts

7.2 Master combined spatial location data visualization charts

7.3 Master advanced spatial location data visualization charts

8. COMPREHENSIVE APPLICATION OF DATA VISUALIZATION

8.1 Familiarize with the content of visualization dashboards

8.2 Master the key points for creating visualization dashboards

8.3 Familiarize with the content of data visualization reports

8.4 Master writing techniques for data visualization reports

EC-222 DATA VISUALIZATION

LIST OF PRACTICALS **96 Hrs**

1. Data source integration
2. Data cleaning
3. Data format conversion
4. Data transposition
5. Creation of bar charts
6. Creation of column charts
7. Creation of stacked column charts
8. Creation of radar charts
9. Creation of scatter plots
10. Creation of funnel charts
11. Creation of pie charts
12. Creation of line charts
13. Creation of Gantt charts
14. Creation of calendar charts
15. Creation of heat-maps
16. Creation of data visualization dashboards
17. Writing data visualization reports

EC-232 DATA ANALYSIS TECHNIQUES

Total Contact Hours

		T	P	C
Theory	32 Hrs			
Practical	96 Hrs	**1**	**3**	**2**

LEARNING OUTCOMES: This course plays a key role in developing students' professional abilities and career skills in the field of business data analysis and application. The goal of the course is to train students to use data-driven thinking and analytical tools to conduct in-depth analysis and effective application of business data. The course content comprehensively covers the basics of data analysis, database construction, descriptive statistical analysis, hypothesis testing, analysis of variance, correlation and regression analysis, time series analysis techniques, and how to write professional data analysis reports. Through this course, students will systematically master the theories and methods of business data analysis, laying a solid foundation for providing data support and insights in business decision-making in the future.

COURSE CONTENTS

1. DATA ANALYSIS AWARENESS 2 Hrs

1.1 Meaning of data analysis

1.2 Data analysis thinking and analytical techniques

1.3 Data analysis process

1.4 Data analysis tools

1.5 Data visualization techniques

1.6 Data ethics and biases

2. DATABASE CREATION 4 Hrs

2.1 Meaning of databases

2.2 Common database operations

2.3 Database creation process

2.4 SQL and NoSQL databases

2.5 Cloud database solutions

2.6 Data pipelines and ETL processes

3. DESCRIPTIVE STATISTICAL ANALYSIS 6 Hrs

3.1 Overview of descriptive statistical analysis

3.2 Analysis of data central tendency

3.3 Analysis of data dispersion

3.4 Analysis of data distribution patterns

4. HYPOTHESIS TESTING 4 Hrs

4.1 Overview of hypothesis testing

4.2 Steps in hypothesis testing

4.3 Basic concepts of hypothesis testing

4.4 Common methods of hypothesis testing

5. ANALYSIS OF VARIANCE (ANOVA) 6 Hrs

5.1 Overview of analysis of variance

5.2 One-way ANOVA

5.3 Two-way ANOVA

5.4 Covariance analysis

6. CORRELATION AND REGRESSION ANALYSIS 4 Hrs

6.1 Overview of correlation and regression

6.2 Simple correlation analysis

6.3 Partial correlation analysis

6.4 Simple linear regression analysis

6.5 Multiple linear regression analysis

6.6 Logistic regression analysis

7. TIME SERIES ANALYSIS 4 Hrs

7.1 Overview of time series analysis

7.2 Moving average forecasting and exponential smoothing forecasting

7.3 Seasonal index model forecasting

7.4 Trend model forecasting

7.5 Auto-regressive Integrated Moving Average (ARIMA) model forecasting

7.6 Machine learning-based forecasting

8. DATA ANALYSIS REPORT 2 Hrs

8.1 Overview of data analysis reports

8.2 Writing requirements for data analysis reports

8.3 Methods for writing data analysis reports

EC-232 DATA ANALYSIS TECHNIQUES

INSTRUCTIONAL OBJECTIVES

1. DATA ANALYSIS AWARENESS

1.1 Understand the meaning of data analysis

1.2 Master data analysis thinking and analytical techniques

1.3 Familiarize with the data analysis process

1.4 Familiarize with commonly used data analysis tools

1.5 Familiarize with data visualization-related techniques

2. DATABASE CREATION

2.1 Understand the meaning of databases

2.2 Familiarize with common operations in MySQL databases

2.3 Familiarize with the process of creating a MySQL database

2.4 Master the content of data preprocessing

2.5 Understand SQL and NoSQL databases

2.6 Familiarize with cloud database solutions

2.7 Understand data pipelines and the ETL process

3. DESCRIPTIVE STATISTICAL ANALYSIS

3.1 Understand the meaning and categories of descriptive statistical analysis

3.2 Master the meaning of mean, median, and mode

3.3 Familiarize with applications of mean

3.4 Master methods for analyzing data central tendency

3.5 Familiarize with the meaning and corresponding metrics of data dispersion

3.6 Master methods for analyzing data dispersion

3.7 Familiarize with data skewness and its measurement methods

3.8 Understand the role of skewness and kurtosis

3.9 Master methods for analyzing data distribution patterns

4. HYPOTHESIS TESTING

4.1 Understand the meaning and principles of hypothesis testing

4.2 Familiarize with the steps of hypothesis testing

4.3 Master the basic concepts of hypothesis testing

4.4 Master commonly used hypothesis testing methods

4.5 Familiarize with the application scenarios of hypothesis testing

5. ANALYSIS OF VARIANCE (ANOVA)

5.1 Understand the meaning and principles of analysis of variance

5.2 Master the methods and steps for one-way analysis of variance

5.3 Familiarize with methods for one-way variance testing

5.4 Understand the meaning and ideas behind two-way analysis of variance

5.5 Master the basic steps for two-way analysis of variance

5.6 Master the principles and basic concepts of covariance analysis

6. CORRELATION AND REGRESSION ANALYSIS

6.1 Understand the meaning and differences between correlation and regression

6.2 Master key points of correlation analysis

6.3 Familiarize with the meaning and types of correlation coefficients

6.4 Master methods for simple correlation analysis

6.5 Master methods for partial correlation analysis

6.6 Master the models for simple regression analysis

6.7 Master methods for simple regression analysis

6.8 Understand methods for multiple regression analysis

6.9 Understand methods for logistic regression analysis

7. TIME SERIES ANALYSIS

7.1 Understand the meaning of time series

7.2 Familiarize with time series forecasting models and methods

7.3 Master the basic formulas and methods for moving average forecasting

7.4 Master the basic formulas and methods for exponential smoothing forecasting

7.5 Master the basic formulas and methods for seasonal index model forecasting

7.6 Master the basic formulas and methods for trend model forecasting

7.7 Understand auto-regressive integrated moving average (ARIMA) model forecasting

7.8 Understand machine learning-based forecasting

8. DATA ANALYSIS REPORT

8.1 Understand the meaning and types of data analysis reports

8.2 Familiarize with the key elements of data analysis reports

8.3 Master techniques for writing data analysis reports

EC-232 DATA ANALYSIS TECHNIQUES

LIST OF PRACTICALS **96 Hrs**

1. Creating a database
2. Analysis of data central tendency
3. Analysis of data dispersion
4. Analysis of data distribution patterns
5. Hypothesis testing analysis
6. One-way analysis of variance (ANOVA)
7. Two-way analysis of variance (ANOVA)
8. Covariance analysis
9. Simple correlation analysis
10. Partial correlation analysis
11. Simple regression analysis
12. Time series analysis
13. Time series forecasting
14. Moving average forecasting
15. Writing data analysis reports

EC-243 ONLINE STORE OPERATION

Total Contact Hours

		T	P	C
Theory	64 Hrs			
Practical	96 Hrs	**2**	**3**	**3**

AIMS: This course focuses on the full process of online store operations, covering both the foundational knowledge and practical skills required for running an online store. The goal is to cultivate students' professional abilities in product operations, traffic acquisition, marketing conversion, and operational analysis. By the end of the course, students will be proficient in key skills such as online store planning and product operations, laying a solid foundation for roles such as online store manager, product operator, campaign operator, and store operations positions.

COURSE CONTENTS

1. ONLINE STORE SETUP AND DESIGN 10 Hrs

1.1 Types of online stores

1.2 Process and required information for store registration

1.3 Content of store design

1.4 Basic information of the store

2. PRODUCT PUBLISHING AND MANAGEMENT 12 Hrs

2.1 Methods of product pricing

2.2 Process of setting up shipping templates

2.3 Content of product publishing

2.4 Techniques for managing product listings

3. MARKETING CAMPAIGN SETUP 12 Hrs

3.1 Categories of store campaigns

3.2 Process of setting up store campaigns

3.3 Types of platform campaigns

3.4 Platform campaign registration rules

4.	**ORDER MANAGEMENT**	**8 Hrs**
4.1	Process for order shipping and handling	
4.2	Precautions for shipping orders	
4.3	Principles for handling returns and exchanges	
5.	**CUSTOMER MANAGEMENT**	**12 Hrs**
5.1	Methods for customer management	
5.2	Content of customer management	
5.3	Precautions for customer management	
6.	**OPERATIONAL DATA ANALYSIS**	**10 Hrs**
6.1	Content of online store operational data analysis	
6.2	Methods for online store operational data analysis	
6.3	Techniques for online store operational data analysis	
6.4	Key performance indicators for online store operations	

EC-243 ONLINE STORE OPERATION

INSTRUCTIONAL OBJECTIVES

1. ONLINE STORE SETUP AND DESIGN

1.1 Understand the types of common online stores

1.2 Familiarize with the store registration process and required information

1.3 Familiarize with the store certification process and required information

1.4 Master the content of store design

1.5 Familiarize with the store design process

1.6 Familiarize with the basic information of the store

2. PRODUCT PUBLISHING AND MANAGEMENT

2.1 Master the methods of product pricing

2.2 Familiarize with the process of setting up shipping templates

2.3 Master the content of product publishing

2.4 Familiarize with the process of product publishing

2.5 Master the precautions for product publishing

2.6 Master techniques for managing product listings

3. MARKETING CAMPAIGN SETUP

3.1 Understand the categories of store campaigns

3.2 Familiarize with the store campaign setup process

3.3 Master the precautions for setting up store campaigns

3.4 Understand the types of platform campaigns

3.5 Familiarize with the platform campaign registration rules

3.6 Master the precautions for platform campaign registration

4. ORDER MANAGEMENT

4.1 Understand the process of order shipping and handling

4.2 Master the precautions for shipping orders

4.3 Master the principles for handling returns and exchanges

5. CUSTOMER MANAGEMENT

5.1 Master the methods of customer management

5.2 Familiarize with the content of customer management

5.3 Master the precautions for customer management

6. OPERATIONAL DATA ANALYSIS

6.1 Familiarize with the content of online store operational data analysis

6.2 Master the methods of online store operational data analysis

6.3 Master the techniques for online store operational data analysis

6.4 Master the key performance indicators for online store operations

EC-243 ONLINE STORE OPERATION

LIST OF PRACTICALS **96 Hrs**

1. Register personal payment account
2. Register personal seller account and certification
3. Register business payment account
4. Register business seller account and certification
5. PC-side store design
6. Mobile-side store design
7. Sub-account management
8. Shipping template setup
9. Product publishing
10. Product listing management
11. Setting up "Buy More, Save More" promotional activity
12. Store coupon promotional activity setup
13. Limited-time, limited-quantity discount activity setup
14. Store bundle promotional activity setup
15. Platform campaign registration
16. Order shipping processing
17. Order returns and exchanges processing
18. Store chat setup
19. Handling customer inquiries
20. Customer relationship maintenance
21. Store operation data analysis

EC-253 VISUAL MARKETING DESIGN

Total Contact Hours

		T	P	C
Theory	64 Hrs			
Practical	96 Hrs	**2**	**3**	**3**

LEARNING OUTCOMES: Students will master foundational skills in visual design, from consumer behavior and psychological analysis to design basics such as color matching and typography. The course aims to help students transform theoretical knowledge into practical skills, using relevant software and tools for online store visual design. This includes style selection, material processing, homepage and product page design, as well as advertising image creation. Upon completing this course, students will have the ability to independently handle visual design tasks for online stores, meeting the professional needs of the e-commerce industry, enhancing user experience, and improving the market competitiveness of products.

COURSE CONTENTS

1. VISUAL DESIGN STYLE POSITIONING 8 Hrs

1.1 Factors influencing consumer behavior

1.2 Types of consumer psychology

1.3 Methods of color matching

1.4 Methods of typography application

1.5 Methods of style selection

2. VISUAL DESIGN MATERIAL PROCESSING 12 Hrs

2.1 Importance of copy-writing

2.2 Types of images and corresponding formats

2.3 Common types of copy-writing

2.4 Terminology related to video editing

2.5 Principles for adding video subtitles

2.6 Methods for writing copy

2.7 AI tools and methods for visual design material processing

3. HOMEPAGE VISUAL DESIGN AND PRODUCTION 16 Hrs

3.1 The role of the homepage in an online store

3.2 Presentation methods for store logos

3.3 Layout methods for store banners

3.4 Common modules on online store homepages

3.5 Composition of carousel posters

3.6 Layout forms for online store homepages

3.7 Design principles for store logos

3.8 Design key points for carousel posters

4. PRODUCT DETAIL PAGE VISUAL DESIGN AND PRODUCTION 16 Hrs

4.1 The role of the product detail page

4.2 The role of the product main image

4.3 The role of product videos

4.4 Elements of a product detail page

4.5 Design concepts for product detail pages

4.6 Design standards for product main images

4.7 Forms of product main image design

4.8 Elements of product descriptions

4.9 Design principles for product descriptions

4.10 Types of product videos

4.11 Layout key points for product detail pages

4.12 Key points for product main image design

4.13 Key points for product description design

4.14 Key points for product video design

5. ADVERTISING IMAGE VISUAL DESIGN AND PRODUCTION 12 Hrs

5.1 Types of campaign images

5.2 Types of promotional images

5.3 Types of live-streaming images

5.4 Key points for designing campaign images

5.5 Key points for designing promotional images

5.6 Key points for designing live-streaming images

EC-253 VISUAL MARKETING DESIGN

INSTRUCTIONAL OBJECTIVES

1. ONLINE STORE VISUAL STYLE SELECTION

1.1 Understand the factors influencing consumer behavior

1.2 Familiarize with types of consumer psychology

1.3 Familiarize with typography applications and layout effects

1.4 Master the application of color and matching effects

1.5 Master online store visual design styles

2. VISUAL DESIGN MATERIAL PROCESSING

2.1 Understand the importance of copywriting

2.2 Understand common types of copywriting

2.3 Familiarize with image types and corresponding formats

2.4 Familiarize with video editing terminology

2.5 Familiarize with key points of video shot sequencing

2.6 Familiarize with principles for adding video subtitles and selecting audio

2.7 Master the methods for material processing using AI visual design tools

3. HOMEPAGE VISUAL DESIGN AND PRODUCTION

3.1 Understand the role of the online store homepage

3.2 Understand the presentation format for store logos

3.3 Understand the layout methods for store banners

3.4 Familiarize with common modules on the homepage

3.5 Familiarize with the content planning of carousel posters

3.6 Master layout forms for the homepage

3.7 Master the design principles for store logos

3.8 Master the design principles for store banners

3.9 Master the key points for carousel poster design

4. PRODUCT DETAIL PAGE VISUAL DESIGN AND PRODUCTION

4.1 Understand the role of the product detail page

4.2 Understand the role of the product main image

4.3 Understand the role of product videos

4.4 Familiarize with the elements of the product detail page

4.5 Familiarize with design concepts for product detail pages

4.6 Familiarize with design specifications for product main images

4.7 Familiarize with design forms for product main images

4.8 Familiarize with the design elements of product descriptions

4.9 Familiarize with design principles for product descriptions

4.10 Familiarize with types of product videos

4.11 Master the key points for product detail page layout

4.12 Master the key points for product main image design

4.13 Master the key points for product description design

4.14 Master the key points for product video design

5. ADVERTISING IMAGE VISUAL DESIGN AND PRODUCTION

5.1 Understand the types of campaign images

5.2 Understand the types of promotional images

5.3 Understand the types of live-streaming images

5.4 Master the key points for designing campaign images

5.5 Master the key points for designing promotional images

5.6 Master the key points for designing live-streaming images

EC-253 VISUAL MARKETING DESIGN

LIST OF PRACTICALS **96 Hrs**

1. Target consumer analysis
2. Visual design style selection
3. Copy-writing material creation
4. Image material processing
5. Video material editing
6. Homepage layout design
7. Store logo design and production
8. Store banner design and production
9. Carousel poster design and production
10. Product main image design and production
11. Product description design and production
12. Product video design and production
13. Campaign image design and production
14. Promotional image design and production
15. Live-streaming image design and production

EC-263 INTERNET MARKETING

Total Contact Hours

Theory	64 Hrs	**T**	**P**	**C**
Practical	96 Hrs	**2**	**3**	**3**

LEARNING OUTCOMES: This course is designed for professionals in internet promotion, operation, and new media marketing. Through a systematic teaching process, the course covers everything from user persona analysis to content planning, distribution, conversion, and performance evaluation and optimization. It aims to comprehensively develop students' professional abilities in search engine marketing, social media marketing, short videos, live streaming, and omni-channel integrated marketing. Combining theoretical instruction with practical operations, the course seeks to enhance students' marketing planning and execution skills, ensuring they can master key skills in internet marketing and meet the demand for professionals in the digital marketing era.

COURSE CONTENTS

1. INTRODUCTION TO INTERNET MARKETING 6 Hrs

1.1 Definition of internet marketing

1.2 Development history of internet marketing

1.3 Job requirements for internet marketing roles

1.4 Application of new technologies in internet marketing

1.5 Career paths in internet marketing

2. INTERNET MARKETING ENVIRONMENT ANALYSIS 8 Hrs

2.1 Contents of internet marketing environment analysis

2.2 Methods of online market research

2.3 Methods for analyzing target consumer behavior

3. MARKETING CAMPAIGN PLANNING 10 Hrs

3.1 Role of marketing campaign planning

3.2 New thinking in internet marketing

3.3 Types of marketing campaigns

3.4 Content of marketing campaign planning

3.5 Process of marketing campaign planning

4. SEARCH ENGINE MARKETING 10 Hrs

4.1 Basic principles of search engine marketing

4.2 Common search engine channels

4.3 Search engine marketing strategies

4.4 Dimensions of search engine performance analysis

4.5 Optimization methods for search engine promotion

5. SOCIAL MEDIA MARKETING 10 Hrs

5.1 Forms of social media marketing

5.2 Social media marketing strategies

5.3 Common social media platforms

5.4 Data analysis indicators for social media marketing

5.5 Optimization methods for social media promotion

6. LIVE STREAMING MARKETING 10 Hrs

6.1 Overview of live streaming marketing

6.2 Key points of live content planning

6.3 Elements of a live streaming script

6.4 Interactive strategies for live product promotion

6.5 Live room interaction management functions

6.6 Data analysis indicators for live streaming

7. SHORT VIDEO MARKETING 10 Hrs

7.1 Types of short videos

7.2 Methods for short video content planning

7.3 Channels for short video distribution

7.4 Strategies for short video placement

7.5 Methods of data analysis in short video marketing

EC-263 INTERNET MARKETING

INSTRUCTIONAL OBJECTIVES

1. OVERVIEW OF INTERNET MARKETING

1.1 Understand the concept of internet marketing

1.2 Familiarize with the development history of internet marketing

1.3 Master the job requirements in internet marketing roles

1.4 Familiarize with new technologies related to internet marketing

1.5 Familiarize with career paths in internet marketing

2. INTERNET MARKETING ENVIRONMENT ANALYSIS

2.1 Familiarize with the content of internet marketing environment analysis

2.2 Master methods for analyzing the marketing environment

2.3 Master online market research methods

2.4 Familiarize with the principles of online market research

2.5 Master methods for analyzing target consumer behavior

3. MARKETING CAMPAIGN PLANNING

3.1 Understand the role of marketing campaign planning

3.2 Familiarize with new thinking in internet marketing

3.3 Master types of marketing campaigns

3.4 Master the content of marketing campaign planning

3.5 Familiarize with the process of marketing campaign planning

3.6 Master methods of marketing campaign planning

3.7 Familiarize with the components of a marketing campaign plan

3.8 Master techniques for writing marketing campaign plans

4. SEARCH ENGINE MARKETING

4.1 Familiarize with the basic principles of search engine marketing

4.2 Master common search engine channels

4.3 Master keyword planning methods for search engine marketing

4.4 Master creative planning techniques for search engine marketing

4.5 Master methods for search engine marketing data analysis

4.6 Master key performance indicators in search engine marketing

4.7 Master strategies for evaluating search engine marketing performance

4.8 Master methods for optimizing search engine marketing effectiveness

5. SOCIAL MEDIA MARKETING

5.1 Familiarize with forms of social media marketing

5.2 Master key points of social media content planning

5.3 Master commonly used social media platforms

5.4 Master methods for building a social media account matrix

5.5 Master techniques for distributing social media content

5.6 Master indicators for social media marketing data analysis

5.7 Master standards for evaluating social media marketing performance

5.8 Master techniques for optimizing social media marketing effectiveness

6. LIVE STREAMING MARKETING

6.1 Understand the meaning and role of live streaming marketing

6.2 Master key points for live streaming content planning

6.3 Familiarize with implementation processes and interactive functions of live sessions

6.4 Master elements of live streaming scripts

6.5 Master content review and recap of live sessions

6.6 Master methods for optimizing live streaming performance

7. SHORT VIDEO MARKETING

7.1 Familiarize with types of short videos

7.2 Master methods for short video content planning

7.3 Master channels for short video distribution

7.4 Master strategies for short video placement

7.5 Master key points in short video shooting and editing

7.6 Master methods for short video marketing data analysis

7.7 Master key points for evaluating short video marketing performance

EC-263 INTERNET MARKETING

LIST OF PRACTICALS **96 Hrs**

1. Research on the current state of internet marketing
2. Research on job market demand for internet marketing roles
3. Analysis of career development paths in internet marketing
4. Internet marketing environment analysis
5. Online market research for internet marketing
6. Analysis of target consumer behavior
7. Marketing campaign theme planning
8. Planning of marketing campaign types
9. Writing marketing campaign proposals
10. Keyword planning for search engine marketing
11. Creative planning for search engine marketing
12. Search engine marketing performance analysis and optimization
13. Construction of social media account matrix
14. Content planning for social media marketing
15. Social media content distribution
16. Social media marketing performance analysis and optimization
17. Writing live streaming scripts
18. Implementation of live streaming marketing
19. Live streaming marketing performance analysis and optimization
20. Content planning for short video marketing
21. Distribution and dissemination of short videos
22. Short video marketing performance analysis and optimization

EC-273 INTERNET PRODUCT DEVELOPMENT

Total Contact Hours

		T	P	C
Theory	64 Hrs			
Practical	96 Hrs	**2**	**3**	**3**

LEARNING OUTCOMES: Through systematic learning and practical training, this course enables students to comprehensively master the entire process of internet product development—from demand analysis to supply chain management, and continuous optimization and operations. It also aims to cultivate students' key skills in market research, demand analysis, product planning, pricing, testing, supplier selection, product evaluation, and optimization. Additionally, the course enhances students' innovative thinking, user-oriented mindset, teamwork skills, and data-driven decision-making capabilities.

COURSE CONTENTS

1. UNDERSTANDING INTERNET PRODUCTS 8 Hrs

1.1 Basic understanding of product development

1.2 Key points in product development

1.3 Job responsibilities in internet product development

1.4 Professional qualities required for internet product development

1.5 Agile product development methods

1.6 Importance of user experience and design thinking in product development

1.7 Methods of cross-functional team collaboration

2. PRODUCT DEMAND IDENTIFICATION 12 Hrs

2.1 Definition and measurement indicators of industry concentration

2.2 Methods and steps for market capacity analysis

2.3 Concepts and methods of market potential analysis

2.4 Methods and indicators for competitive store analysis

2.5 Indicators for consumer profiling and purchase preference analysis

3. PRODUCT PLANNING AND PRICING 12 Hrs

3.1 Definition and characteristics of product categories

3.2 Principles and strategies of product portfolio

3.3 Basic principles for selecting target products

3.4 Strategies and implementation techniques for target product selection

3.5 Factors influencing product pricing

3.6 Methods of product pricing

3.6.1 Dynamic pricing strategies and their application in e-commerce

3.6.2 Value-based pricing and freemium model for internet products

4. PRODUCT LAUNCH CHANNEL TESTING 12 Hrs

4.1 Common product launch channels

4.2 Key indicators for evaluating channels

4.3 Methods for evaluating product launch channels

4.4 Preparatory work for product launch

4.5 Product display strategies

4.6 Methods for product launch channel testing

4.7 Performance analysis indicators for channel testing

5. PRODUCT SUPPLY CHAIN MANAGEMENT 12 Hrs

5.1 Methods for analyzing purchasing requirements

5.2 Methods for demand forecasting

5.3 Principles and procedures for procurement planning

5.4 Procurement strategies for different types of products

5.5 Indicators for supplier evaluation

5.6 Methods for supplier selection

5.7 Approaches to supplier relationship management

5.8 Application of digital tools in supply chain management

5.9 Impact of block-chain on supply chain transparency

5.10 Management strategies for last-mile delivery logistics

5.11 Ethical procurement and green supply chain management

6. PRODUCT EVALUATION AND OPTIMIZATION 8 Hrs

6.1 Meaning and importance of product performance evaluation

6.2 Product performance evaluation indicators

6.3 Strategies for product performance optimization

6.4 Meaning of product category structure and its evaluation

6.5 Key elements of category structure evaluation

6.6 Strategies for optimizing category structure

EC-273 INTERNET PRODUCT DEVELOPMENT

INSTRUCTIONAL OBJECTIVES

1. UNDERSTANDING INTERNET PRODUCTS

1.1 Understand the meaning of product development

1.2 Familiarize with the process of product development

1.3 Master the importance of product development

1.4 Understand the key points of product development

1.5 Master job responsibilities in internet product development

1.6 Familiarize with the professional qualities required for internet product development

1.7 Familiarize with the competency requirements for internet product development roles

1.8 Familiarize with agile product development methods

1.9 Understand the importance of user experience and design thinking in product development

2. PRODUCT DEMAND IDENTIFICATION

2.1 Understand the definition and measurement indicators of industry concentration

2.2 Master the methods and steps for market capacity analysis

2.3 Understand the concept and methods of market potential analysis

2.4 Understand the concept and importance of industry trends

2.5 Familiarize with methods and indicators for competitive store analysis

2.6 Understand indicators for consumer profiling and purchase preference analysis

3. PRODUCT PLANNING AND PRICING

3.1 Understand the definition and characteristics of product categories

3.2 Master the principles and strategies of product portfolio

3.3 Master methods for category role positioning

3.4 Familiarize with methods and techniques for category innovation and optimization

3.5 Understand the importance and basic principles of target product selection

3.6 Master key factor analysis for target product selection

3.7 Master strategies and implementation techniques for selecting target products

3.8 Understand factors influencing product pricing

3.9 Familiarize with pricing methods

3.10 Master product pricing strategies

4. PRODUCT LAUNCH CHANNEL TESTING

4.1 Familiarize with common product launch channels

4.2 Master key indicators for channel evaluation

4.3 Familiarize with the process and methods for selecting and evaluating product launch channels

4.4 Understand channel combination strategies for product launch

4.5 Familiarize with product launch preparation tasks

4.6 Master the product launch process

4.7 Understand product display strategies

4.8 Familiarize with the concept and process of A/B testing

4.9 Familiarize with the concept, purpose, and analysis method of the Four-Quadrant Rule

4.10 Master dimensions for analyzing channel testing performance

4.11 Master methods for evaluating the effectiveness of channel testing

5. PRODUCT SUPPLY CHAIN MANAGEMENT

5.1 Understand the concept and key points of procurement demand analysis

5.2 Master methods of demand analysis

5.3 Master methods for demand forecasting

5.4 Familiarize with the content of procurement planning

5.5 Master the principles and process of procurement planning

5.6 Master procurement strategies for different types of products

5.7 Master indicators for supplier evaluation

5.8 Familiarize with methods for supplier selection

5.9 Understand processes and methods for supplier evaluation and assessment

5.10 Familiarize with approaches to supplier relationship management

5.11 Familiarize with usage methods of digital supply chain tools

5.12 Understand the impact of block-chain on supply chain transparency

5.13 Master last-mile logistics management strategies

5.14 Understand the meaning and application of ethical sourcing and green supply chain management

6. PRODUCT EVALUATION AND OPTIMIZATION

6.1 Understand the meaning and role of product performance evaluation

6.2 Master indicators for evaluating product performance

6.3 Master strategies for product performance optimization

6.4 Understand the concept of category structure and its evaluation

6.5 Familiarize with key elements of category structure evaluation

6.6 Master strategies for category structure optimization

EC-273 INTERNET PRODUCT DEVELOPMENT

LIST OF PRACTICALS **96 Hrs**

1. Analyze case studies of typical internet product development
2. Research job market demand for internet product development roles
3. Analyze job requirements for internet product development positions
4. Industry demand analysis
5. Competitive store analysis
6. Competitive product analysis
7. Purchase preference analysis
8. Customer demand analysis
9. Product category planning
10. Product selection based on product life cycle analysis
11. Product selection based on return on investment (ROI) analysis
12. Pricing based on the PSM (Price Sensitivity Measurement) model
13. Competitor-based pricing
14. Product differentiation and positioning
15. Product line planning
16. Evaluation and selection of product launch channels
17. Product launch and presentation
18. Analysis of product launch channel testing effectiveness
19. Procurement demand analysis
20. Preparation of product procurement plans
21. Supplier evaluation and selection
22. Product performance evaluation and optimization
23. Category structure evaluation and optimization

EC-283 O2O RETAIL STORE OPERATIONS

Total Contact Hours

		T	P	C
Theory	64 Hrs			
Practical	96 Hrs	**2**	**3**	**3**

LEARNING OUTCOMES: This course is designed to help students gain a deep understanding of the foundational theories of the O2O (Online-to-Offline) model and explore its practical application in retail store operations. The course covers key strategies and techniques including operational data collection, operational data analysis, product planning, product publishing and optimization, merchant management, promotional activities, and user operations. Through case studies and practical simulations, students will enhance their ability to solve real-world operational problems. Additionally, the course emphasizes the development of teamwork and innovative thinking, aiming to equip students with essential skills and competencies for future careers in the e-commerce industry.

COURSE CONTENTS

1. UNDERSTANDING THE O2O MODEL FOR RETAIL STORES 8 Hrs

1.1 Definition and characteristics of the O2O model for retail stores

1.2 Core components of the O2O retail store model

1.3 Differences between O2O and traditional retail models

1.4 Development trends of the O2O retail model

2. OPERATIONAL DATA COLLECTION 8 Hrs

2.1 Types of operational data in O2O retail stores

2.2 Methods and tools for data collection

2.3 Precautions in data collection

2.4 Purpose and significance of data collection

3. OPERATIONAL DATA ANALYSIS 8 Hrs

3.1 Dimensions of operational data analysis

3.2 Methods of data analysis

3.3 Tools for operational data analysis

3.4 Structure of data analysis reports

4. PRODUCT PLANNING 8 Hrs

4.1 Principles of product planning

4.2 Methods of product planning

4.3 Methods of product category management

4.4 Inventory management strategies

4.5 Product pricing strategies

4.6 Content of product planning

4.7 Key considerations in product planning

5. PRODUCT PUBLISHING AND OPTIMIZATION 8 Hrs

5.1 Product publishing process

5.2 Product publishing content

5.3 Key considerations in product publishing

5.4 Techniques for optimizing product images

5.5 Key considerations for optimizing product descriptions

5.6 Methods for optimizing product titles

6. INDUSTRY MERCHANT MANAGEMENT 8 Hrs

6.1 Methods for selecting industry merchants

6.2 Content of industry merchant cooperation agreements

6.3 Content of industry merchant training

6.4 Merchant evaluation and incentive mechanisms

7. PROMOTIONAL CAMPAIGN OPERATIONS 8 Hrs

7.1 Types and characteristics of promotional campaigns

7.2 Process of campaign planning

7.3 Key considerations during campaign execution

7.4 Performance evaluation indicators for promotional activities

8. USER OPERATIONS 8 Hrs

8.1 Methods of user needs analysis

8.2 User behavior funnel model

8.3 Methods for building a user growth system

8.4 Strategies for precision user marketing

EC-283 O2O RETAIL STORE OPERATIONS

INSTRUCTIONAL OBJECTIVES

1. UNDERSTANDING THE O2O MODEL FOR RETAIL STORES

1.1 Understand the meaning and characteristics of the O2O model for retail stores

1.2 Familiarize with the core components of the O2O model for retail stores

1.3 Familiarize with the differences between the O2O model and traditional retail

1.4 Understand the development trends of the O2O retail model

2. OPERATIONAL DATA COLLECTION

2.1 Master the types of operational data in O2O retail stores

2.2 Master the methods and tools for data collection

2.3 Familiarize with the key considerations in data collection

2.4 Understand the purpose and significance of data collection

3. OPERATIONAL DATA ANALYSIS

3.1 Master the dimensions of operational data analysis

3.2 Master the methods of operational data analysis

3.3 Master the tools for operational data analysis

3.4 Master the writing methods of data analysis reports

4. PRODUCT PLANNING

4.1 Understand the principles of product planning

4.2 Master the methods of product planning

4.3 Master the methods of product category management

4.4 Familiarize with inventory management strategies

4.5 Master product pricing strategies

4.6 Familiarize with the content of product planning

4.7 Understand key considerations in product planning

5. PRODUCT PUBLISHING AND OPTIMIZATION

5.1 Familiarize with the process of product publishing

5.2 Familiarize with the content of product publishing

5.3 Master key considerations in product publishing

5.4 Master techniques for optimizing product images

5.5 Master key considerations for optimizing product descriptions

5.6 Master methods for optimizing product titles

6. INDUSTRY MERCHANT MANAGEMENT

6.1 Master the methods for selecting industry merchants

6.2 Familiarize with the content of cooperation agreements with industry merchants

6.3 Understand the content of merchant training

6.4 Master the assessment and incentive mechanisms for merchants

7. PROMOTIONAL CAMPAIGN OPERATIONS

7.1 Master the types and characteristics of promotional activities

7.2 Master the process of campaign planning

7.3 Familiarize with key considerations during campaign execution

7.4 Master performance evaluation indicators for promotional activities

8. USER OPERATIONS

8.1 Master the methods of user needs analysis

8.2 Master the user behavior funnel model

8.3 Master the methods of building a user growth system

8.4 Master the strategies for precision user marketing

EC-283 O2O RETAIL STORE OPERATIONS

LIST OF PRACTICALS **96 Hrs**

1. Analyze case studies of typical O2O retail store operations
2. Analyze the differences between the O2O retail model and traditional retail
3. Research the development trends of O2O retail stores
4. Collect sales data in retail stores
5. Collect customer data in retail stores
6. Collect product data in retail stores
7. Analyze sales data in retail stores
8. Analyze customer data in retail stores
9. Analyze product data in retail stores
10. Plan product categories
11. Plan product inventory
12. Publish product information
13. Optimize product information
14. Select industry merchants
15. Evaluate industry merchants
16. Select promotional activity tools
17. Plan promotional activities
18. Promote promotional activities
19. Evaluate the effectiveness of promotional activities
20. Analyze user behavior
21. Analyze user needs
22. Build a user growth system
23. Implement precision user marketing

Gen-301 ISLAMIAT AND PAK STUDIES

سال سوئم

حصہ اول اسلامیات

تدریس مقاصد

قرآن حکیم:

عمومی مقاصد: منتخب سورتوں اور آیات کی روشنی میں اسلام کے بنیادی مقاصد اور عبادات جان سکے

خصوصی مقاصد: طالب علم اس قابل ہو جائے گا کہ۔

سورۃ الفاتحہ، آیت لکرسی، سورۃ بقرہ کی آخری آیات از من الرسول سے اور سورۃ اخلاق کا ترجمہ و تشریح کر سکے

طالب علم درج ذیل کا مفہوم بیان کر سکے

() رب العالمین صرف اللہ تعالیٰ ہے

() اللہ رحم کرنے والا ہے

() قیامت کے دن بادشاہی اللہ کی ہوگی

() عبادات اور استعانت کا حقدار صرف اللہ ہے

() طالب علم درج ذیل کا مفہوم بیان کر سکے

() اللہ پاک ہر عیب سے پاک ہے

() اللہ کے اسمائے حسنہ حق اور قیوم ہیں

() تمام انبیاء پر ایمان لانا ضروری ہے

() رسول، ملائکہ، کتب، سماویہ، پر ایمان لانا فرض ہے

() اطاعت حقیقی صرف اللہ کے لیے ہے

() اسلامی احکامات پر عمل کرنا امسانی بساط میں ہے

() کفر کو اللہ کی مدد کے بغیر شکست نہیں دی جا سکتی

() اللہ ایک ہے

() اللہ کسی کا محتاج نہیں نہ اسکا کوئی شریک ہے

منتخب احادیث:

عمومی مقصد: احادیث کی روشنی میں اسلامی تعلیمات پر عمل پیرا ہو سکے

خصوصی مقاصد:

() احادیث کا ترجمہ بیان کر سکے

() احادیث کی تشریح کر سکے

() معاشرتی اور انفرادی زندگی میں احادیث سے رہنمائی حاصل کر سکے

حقوق وفرائض:

عمومی مقاصد:

() اسلامی معاشرے کا ایک اچھا فرد بن سکے

خصوصی مقاصد:

() والدین کے حقوق وفرائض بیان کر سکے

() ہمسائیوں کے حقوق بیان کر سکے

() بچوں کے حقوق بیان کر سکے

() عورتوں کے حقوق کی پاسداری کر سکے

() بزرگ شہریوں کے حقوق کا خیال رکھ سکے

() مختلف حضرات کے حقوق جان سکے اور ان کے حقوق کی پاسداری کر کے انہیں معاشرے کا ایک مفید فرد بنایا جا سکے

() اسلام میں حقوق وفرائض کی آگاہی کی صورت میں اپنے اندر خدمت خلق کا جذبہ پیدا کر سکے

اسلامی اقدار:

عمومی مقاصد:

() طالب علم جان سکے گا کہ تعلیم کا مقصد حسن اخلاق سے متصف ہونا ہے

خصوصی مقاصد:

() اخلاق کے معنی ومفہوم کو بیان کر سکے

() اسلام میں حسن واخلاق کی اہمیت بیان کر سکے

() قرآن وسنت کی روشنی میں صبر واستقلال کی اہمیت بیان کر سکے

() ایفائے عہد کی اہمیت بیان کر سکے

() اخوت کے معنی ومفہوم بیان کر سکے

() اخوت اسلامی کی اہمیت بیان کر سکے

نصاب (سال سوئم)

GEN 301

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1	0	1

کل وقت 12 گھنٹے

مطالعہ پاکستان

حصہ دوئم

موضوعات:

() قیام پاکستان
() باؤنڈری کمیشن
() ریڈکلف ایوارڈ
() تقسیم بنگال
() تقسیم پنجاب
() مسئلہ مہاجرین
() ریاست کا الحاق
() ریاست جموں کشمیر
() نہری پانی کا تنازعہ
() قرارداد پاکستان
() علماء کے بائیس نکات
() 1956-1962-اور 1973 کے دساتیر کی اسلامی/انسانی حقوق کی دفعات (8 تا 28)۔
() اقلیتوں کے حقوق۔ دیگر محروم طبقات کے حقوق
() پاکستان کا محل وقوع اور اسکی جغرافیائی اہمیت۔ GSP+ کا تعارف اور عملی طریقہ کار
() قدرتی وسائل (تیل، گیس، کوئلہ)

غیر مسلم طلباء کے لیے

نصاب اخلاقیات

سال سوئم

GEN301

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کل وقت 20 گھنٹے

موضوعات:

() احساس ذمہ داری

() مثبت ذہن

() عدل وانصاف

() قومی خدمت کا جذبہ

() ذکر ونظر کی پاکیزگی

() احترام آدمیت

() شائستگی

() عفوودرگذر

() بردباری

() خوداتحصاری

() اثر ونفوذ

() جامعیت

() اپنی ذات کی معرفت (بذریعہ ہم عمر طلباء، اساتذہ، اہم شخصیات)

() بچوں کے حقوق

() عورتوں کے حقوق

() بزرگ شہریوں کے حقوق

() مخنث حضرات کے حقوق

غیر مسلم طلباء کے لیے
نصاب اخلاقیات (سال سوئم)

تدریس مقاصد:

عمومی مقاصد:

() ملکی ترقی کے لیے اعلیٰ اوصاف کے ساتھ بہتر طور پر ملک وملت کی خدمت کر سکے

خصوصی مقاصد: طالب علم اس قابل ہو سکے کہ

() موضوعات کا مطلب بیان کر سکے

() عملی زندگی سے مثالوں کی نشاندہی کر سکے

() موضوعات کی اہمیت بیان کر سکے

() اپنی شخصیت اور معاشرے پر موضوعات کے مطابق اثرات پیدا کرنے کے طریقے بیان کر سکے

() مثبت ذہن کے ساتھ کام کر سکے

() عدل وانصاف سے ادارہ میں، دفتر میں بہتر ماحول پیدا کر سکے

() ماحول کو اخلاقی طور پر پاکیزہ بنائے

() کارکنوں کی بہتر طور پر دل جوئی کر سکے

() کارکردگی میں اضافہ کر سکے

() باہمی احترام کی برکات سے استفادہ کر سکے

() بچوں کے حقوق بیان کر سکے

() عورتوں کے حقوق کی پاسداری کر سکے

() بزرگ شہریوں کے حقوق کا خیال رکھ سکے

() مخنث حضرات کے حقوق جان سکے اور ان کے حقوق کی پاسداری کر کے انہیں معاشرے کا ایک مفید فرد بنایا جا سکے

EC-313 DATA-DRIVEN OPERATIONS

Total Contact Hours

		T	P	C
Theory	64 Hrs			
Practical	96 Hrs	**2**	**3**	**3**

LEARNING OUTCOMES: This course aims to enable students to gain a deep understanding of the importance and complexity of data-driven operations, and to master essential data analysis skills, including data collection, management, cleaning, analysis, and visualization. Students will learn how to apply data-driven approaches to optimize product operations, develop marketing strategies, monitor operational and key performance indicators (KPIs), and conduct market and competitive analysis. The course also emphasizes data security, legal regulations on privacy protection, and the future applications of data-driven operations in the fields of artificial intelligence and machine learning. Upon completion, students will be equipped with the ability to make effective decisions and respond to challenges in a data-driven business environment.

COURSE CONTENTS

1. FUNDAMENTALS OF DATA-DRIVEN OPERATIONS 4 Hrs

1.1 Definition and significance of data-driven operations

1.2 Main components of data-driven operations

1.3 Basic approaches to data-driven operations

1.4 Business processes in data-driven operations

2. DATA-DRIVEN OPERATIONS PLANNING 8 Hrs

2.1 Methods for analyzing the strategic environment of data-driven operations

2.2 Key points for developing market strategies in data-driven operations

2.3 Key performance indicators in data-driven operations

2.4 Techniques for building a KPI system for data-driven operations

3. DATA-DRIVEN PRODUCT OPERATIONS 12 Hrs

3.1 Methods for data-driven product selection

3.2 Types of risks in data-driven product selection

3.3 Methods for digital procurement demand forecasting

3.4 Techniques for product positioning

3.5 Methods for product pricing

4. PRECISE TRAFFIC ACQUISITION 8 Hrs

4.1 Mainstream traffic acquisition methods

4.2 Key points for traffic strategy development

4.3 Techniques for improving bidding rankings

4.4 Methods for analyzing promotional effectiveness

5. MARKETING DRIVEN BY DATA 12 Hrs

5.1 Conversion funnel model

5.2 Methods to improve conversion rates

5.3 Factors affecting average transaction value

5.4 Types of transaction data

6. DATA-DRIVEN CUSTOMER MANAGEMENT 12 Hrs

6.1 Types of customer data

6.2 Common customer service indicators

6.3 Techniques for differentiated customer management

6.4 Standards for customer service evaluation

7. DATA-DRIVEN PERFORMANCE ANALYSIS 8 Hrs

7.1 Factors affecting retail store operations

7.2 Methods for performance analysis in data-driven operations

7.3 Dimensions of performance analysis in data-driven operations

7.4 Standards for evaluating performance in data-driven operations

EC-313 DATA-DRIVEN OPERATIONS

INSTRUCTIONAL OBJECTIVES

1. FUNDAMENTALS OF DATA-DRIVEN OPERATIONS

1.1 Understand the meaning and significance of data-driven operations

1.2 Master the main components of data-driven operations

1.3 Master the basic approaches to data-driven operations

1.4 Familiarize with the business processes of data-driven operations

2. DATA-DRIVEN OPERATIONS PLANNING

2.1 Master methods for analyzing the strategic environment of data-driven operations

2.2 Familiarize with key points for developing market strategies in data-driven operations

2.3 Understand the meaning of key performance indicators in data-driven operations

2.4 Master techniques for building a data-driven KPI system

3. DATA-DRIVEN PRODUCT OPERATIONS

3.1 Master methods of data-driven product selection

3.2 Understand types of risks in data-driven product selection

3.3 Familiarize with digital procurement demand forecasting methods

3.4 Master techniques for product positioning

3.5 Master methods for product pricing

4. PRECISE TRAFFIC ACQUISITION

4.1 Familiarize with mainstream traffic acquisition methods

4.2 Master key points for developing traffic strategies

4.3 Master techniques for improving bid rankings

4.4 Master methods for analyzing promotional effectiveness

5. MARKETING DRIVEN BY DATA

5.1 Understand the conversion funnel model

5.2 Master methods for improving conversion rates

5.3 Familiarize with factors affecting average transaction value

5.4 Master types of transaction data

6. DATA-DRIVEN CUSTOMER MANAGEMENT

6.1 Familiarize with types of customer data

6.2 Master the meaning of common customer service indicators

6.3 Master techniques for differentiated customer management

6.4 Master key considerations in customer service evaluation

7. DATA-DRIVEN PERFORMANCE ANALYSIS

7.1 Understand factors influencing online store operations

7.2 Master methods for analyzing data-driven operational performance

7.3 Master dimensions of performance analysis in data-driven operations

7.4 Familiarize with standards for evaluating data-driven operational performance

EC-313 DATA-DRIVEN OPERATIONS

LIST OF PRACTICALS **96 Hrs**

1. Research mainstream data analysis tools
2. Analyze typical cases of data-driven operations
3. Research the current status and development trends of data-driven operations
4. Analyze the strategic environment for data-driven operations
5. Develop market strategies for data-driven operations
6. Analyze product selection based on hot-selling categories
7. Analyze product selection based on cost-benefit analysis
8. Assess risks in data-driven product selection
9. Forecast procurement demand using digital methods
10. Evaluate digital procurement channels
11. Determine product pricing using data-driven methods
12. Formulate precise traffic acquisition strategies
13. Optimize search rankings precisely
14. Improve bidding rankings precisely
15. Conduct precise targeting in information flow advertising
16. Formulate data-driven marketing strategies
17. Implement data-driven marketing activities
18. Evaluate the effectiveness of data-driven marketing
19. Gain insights through customer profiling data
20. Gain insights through customer behavior data
21. Manage customer relationships with differentiated strategies
22. Evaluate customer service through diversified methods
23. Analyze and evaluate operational performance
24. Optimize operational performance

EC-322 COMMUNITY OPERATIONS

Total Contact Hours

Theory	32 Hrs	**T**	**P**	**C**
Practical	96 Hrs	**1**	**3**	**2**

LEARNING OUTCOMES: Through systematic and in-depth learning, this course covers the full process of community operations—from fundamental concepts, planning and structuring, implementation and preparation, traffic acquisition strategies, engagement methods, monetization models, to risk management. Students will master each critical step from building to managing a community, achieving efficient operation, enhancing user engagement and loyalty, and maximizing commercial value. The course provides strong support for successful and sustainable community operations.

COURSE CONTENTS

1. COMMUNITY OPERATIONS OVERVIEW 4 Hrs

1.1 Concept and characteristics of a community

1.2 Key components of a community

1.3 The value of community operations

1.4 Current status and development trends of community operations

2. COMMUNITY BUILDING 6 Hrs

2.1 Types of communities

2.2 Methods for community positioning

2.3 Techniques for building communities

2.4 Basic information setup for communities

2.5 Community management rules

3. COMMUNITY TRAFFIC ACQUISITION 6 Hrs

3.1 Tools and techniques for community traffic acquisition

3.2 Social media promotion and traffic generation methods

3.3 Content marketing strategies for traffic acquisition

3.4 Community traffic acquisition strategies

3.5 Key considerations in traffic acquisition for communities

4. COMMUNITY ENGAGEMENT 6 Hrs

4.1 Core objectives of community engagement

4.2 Main forms of community engagement

4.2.1 Content interaction

4.2.2 Activity-based interaction

4.2.3 Gamified interaction

4.2.4 Task-based interaction

4.3 Incentive mechanisms for community engagement

4.4 Tools and technologies for community engagement

4.5 Key considerations in community engagement

4.6 Long-term strategies for community engagement

5. COMMUNITY MONETIZATION 6 Hrs

5.1 Meaning of community monetization

5.2 Foundations of community monetization

5.3 Methods of community monetization

5.3.1 Commoditization of community access

5.3.2 Monetization through community-based services

5.3.3 Community advertising revenue

5.3.4 Product monetization through communities

5.3.5 Knowledge-based paid content

5.4 Community monetization strategies

5.5 Key considerations in community monetization

6. COMMUNITY MANAGEMENT 4 Hrs

6.1 Organizational structure of the community team

6.2 Advanced community management tools

6.3 Methods for building community membership systems

6.4 Daily management content for community members

6.5 KPI standards for community management

6.6 Community data privacy compliance

EC-322 COMMUNITY OPERATIONS

INSTRUCTIONAL OBJECTIVES

1. COMMUNITY OPERATIONS OVERVIEW

1.1 Understand the concept and characteristics of communities

1.2 Master the key components of a community

1.3 Familiarize with the value of community operations

1.4 Familiarize with common community platforms

1.5 Understand the current status and development trends of community operations

2. COMMUNITY BUILDING

2.1 Understand common types of communities

2.2 Familiarize with common methods of community positioning

2.3 Master customer classification dimensions

2.4 Master customer segmentation methods

2.5 Master principles of community channel selection and positioning

2.6 Familiarize with basic community information

2.7 Master the content of community rules

2.8 Master key considerations in community bot configuration

3. COMMUNITY TRAFFIC ACQUISITION

3.1 Understand tools and technologies for community traffic acquisition

3.2 Master social media promotion methods for traffic acquisition

3.3 Master content marketing methods for traffic acquisition

3.4 Familiarize with community traffic acquisition strategies

3.5 Understand key considerations in community traffic acquisition

4. COMMUNITY ENGAGEMENT

4.1 Understand the core objectives of community engagement

4.2 Master methods of community engagement

4.3 Familiarize with incentive mechanisms for community engagement

4.4 Understand tools and technologies for community engagement

4.5 Familiarize with key considerations in community engagement

4.6 Master long-term strategies for community engagement

5. COMMUNITY MONETIZATION

5.1 Understand the meaning of community monetization

5.2 Familiarize with the foundations of community monetization

5.3 Master community monetization methods

5.4 Familiarize with community monetization strategies

5.5 Understand key considerations in community monetization

6. COMMUNITY MANAGEMENT

6.1 Understand the organizational structure of community teams

6.2 Familiarize with advanced community management tools

6.3 Master methods for building a community membership system

6.4 Familiarize with daily management content for community members

6.5 Understand KPI standards for community management

6.6 Familiarize with data privacy compliance in community management

EC-322 COMMUNITY OPERATIONS

LIST OF PRACTICALS **96 Hrs**

1. Research social platforms and their characteristics
2. Research common types of communities and their features
3. Analyze typical cases of community operations
4. Research the current status and development trends of community operations
5. Community classification
6. Community positioning
7. Build a community channel matrix
8. Set up basic community information
9. Configure community bots
10. Drive traffic from social platforms
11. Drive traffic from e-commerce platforms
12. Community viral promotion (fission marketing)
13. Analyze reasons for user dropout from communities
14. Analyze user engagement preferences in communities
15. Set up interactive community activities
16. Plan community engagement content
17. Research community monetization models
18. Analyze typical cases of community monetization
19. Define roles, responsibilities, and permissions of community managers
20. Build community membership systems and benefits
21. Manage daily operations of community members
22. Handle community crisis management

EC-333 INTERNET PROMOTION

Total Contact Hours

		T	P	C
Theory	64 Hrs			
Practical	96 Hrs	**2**	**3**	**3**

LEARNING OUTCOMES: This course comprehensively covers all aspects of online promotion, from basic understanding to planning and optimization. Key skills include Search Engine Optimization (SEO), Search Engine Marketing (SEM), information flow advertising, and data analysis. Through this course, students will master the core competencies of online promotion planning, performance data analysis, and digital marketing strategy execution. The course prepares students for roles such as Online Promotion Specialist and Data Analysis Specialist.

COURSE CONTENTS

1. INTERNET PROMOTION OVERVIEW 8 Hrs

1.1 Definition of online promotion

1.2 Advantages of online promotion

1.3 Functions of online promotion

1.4 Understanding online promotion job roles

1.5 Career planning in online promotion

2. INTERNET PROMOTION PLANNING 12 Hrs

2.1 Content of market analysis for online promotion

2.2 Methods for market analysis in online promotion

2.3 Techniques for selecting online promotion methods

2.4 Methods for setting online promotion budgets

3. SEARCH ENGINE OPTIMIZATION (SEO) 12 Hrs

3.1 Search engine ranking mechanisms

3.2 Factors affecting search rankings

3.3 Types of keywords

3.4 Methods for keyword research

3.5 Methods for creating keyword databases

3.6 The role of long-tail keywords

3.7 Methods for combining long-tail keywords

3.8 The role of product titles

3.9 Methods for creating product titles

3.10 Strategies for optimizing product titles

3.11 Methods for voice search optimization

3.12 Local search engine optimization

3.13 Common SEO optimization tools

4. SEARCH ENGINE MARKETING (SEM) 12 Hrs

4.1 Methods for setting up promotional regions

4.2 Key considerations for setting promotional times

4.3 Dimensions for analyzing promotional products

4.4 Considerations for selecting promotional products

4.5 Bidding methods for keywords

4.6 Keyword matching methods

4.7 Types of creative ads

4.8 Directions for optimizing creative ads

4.9 Types of target audiences

4.10 Methods for audience bid adjustment

4.11 Methods for setting up promotional plans and groups

4.12 Keyword optimization techniques

5. INFORMATION FLOW PROMOTION 12 Hrs

5.1 Hierarchy of information flow promotion accounts

5.2 Types of audience targeting

5.3 Methods for selecting audience tags

5.4 Types of product and shop targeting

5.5 Traffic distribution models

5.6 Bidding methods for resource placements

5.7 Advertising strategies for emerging information flow platforms

5.8 The importance of native ads and methods for content integration

5.9 The role of AI-driven targeting in personalized ad placement

6. ONLINE PROMOTION DATA ANALYSIS AND OPTIMIZATION

8 Hrs

6.1 Methods for acquiring online promotion data

6.2 Dimensions for analyzing online promotion data

6.3 Methods for analyzing online promotion data

6.4 Techniques for optimizing online promotion results

EC-333 INTERNET PROMOTION

INSTRUCTIONAL OBJECTIVES

1. INTERNET PROMOTION OVERVIEW

1.1 Understand the meaning of online promotion

1.2 Familiarize with the advantages of online promotion

1.3 Master the functions of online promotion

1.4 Understand the job requirements for online promotion

1.5 Master career planning for online promotion positions

2. INTERNET PROMOTION PLANNING

2.1 Familiarize with the content of market analysis for online promotion

2.2 Master the methods of market analysis for online promotion

2.3 Understand the techniques for selecting online promotion methods

2.4 Master the methods for setting online promotion budgets

3. SEARCH ENGINE OPTIMIZATION (SEO)

3.1 Master the search engine ranking mechanisms

3.2 Understand the factors affecting search rankings

3.3 Familiarize with types of keywords

3.4 Master the methods for keyword research

3.5 Master the methods for creating keyword databases

3.6 Understand the role of long-tail keywords

3.7 Master the methods for combining long-tail keywords

3.8 Understand the role of product titles

3.9 Familiarize with methods for creating product titles

3.10 Master strategies for optimizing product titles

3.11 Master methods for voice search optimization

3.12 Familiarize with local search engine optimization

3.13 Understand common SEO optimization tools

4. SEARCH ENGINE MARKETING (SEM)

4.1 Master the methods for setting promotional regions

4.2 Understand the key considerations for setting promotional times

4.3 Familiarize with dimensions for analyzing promotional products

4.4 Master considerations for selecting promotional products

4.5 Familiarize with bidding methods for keywords

4.6 Understand keyword matching methods

4.7 Understand types of creative ads

4.8 Master directions for optimizing creative ads

4.9 Familiarize with types of target audiences

4.10 Master methods for audience bid adjustments

4.11 Master methods for setting up promotional plans and groups

4.12 Familiarize with keyword optimization techniques

5. INFORMATION FLOW PROMOTION

5.1 Understand the hierarchy of information flow promotion accounts

5.2 Familiarize with types of audience targeting

5.3 Master methods for selecting audience tags

5.4 Understand types of product and shop targeting

5.5 Master traffic distribution models

5.6 Familiarize with bidding methods for resource placements

5.7 Master advertising strategies for emerging information flow platforms

5.8 Familiarize with the importance of native ads and methods for content integration

5.9 Understand the role of AI-driven targeting in personalized ad placement

6. ONLINE PROMOTION DATA ANALYSIS AND OPTIMIZATION

6.1 Familiarize with methods for acquiring online promotion data

6.2 Master dimensions for analyzing online promotion data

6.3 Master methods for analyzing online promotion data

6.4 Master techniques for optimizing online promotion results

EC-333 INTERNET PROMOTION

LIST OF PRACTICALS 96 Hrs

1. Research the current status of online promotion
2. Research job demand in online promotion
3. Analyze job requirements for online promotion positions
4. Research career development paths in online promotion
5. Market analysis for online promotion
6. Develop online promotion plans
7. Classify keywords
8. Keyword research – search popularity
9. Keyword research – ranking
10. Combine long-tail keywords
11. Optimize product titles
12. Set promotion time and region
13. Select promotional products
14. Bidding and matching for keywords
15. Edit and optimize creatives
16. Audience bid adjustment
17. Search engine promotion
18. Manage information flow promotion accounts
19. Audience targeting for promotion
20. Product and shop targeting
21. Select resource placement
22. Bid for resource placement
23. Analyze online promotion data
24. Optimize online promotion results

EC-343 NEW MEDIA MARKETING

Total Contact Hours

		T	P	C
Theory	64 Hrs			
Practical	96 Hrs	**2**	**3**	**3**

LEARNING OUTCOMES: This course focuses on new media content planning and production, with a strong emphasis on data-driven operations. It covers six key areas of new media marketing: awareness of new media marketing, marketing planning, copywriting for new media, text and image marketing, short video marketing, and data analysis for new media marketing. The course aims to develop students' systematic thinking in new media marketing, while equipping them with practical methods, thereby building a comprehensive knowledge system and internalized skills in new media marketing.

COURSE CONTENTS

1. NEW MEDIA MARKETING OVERVIEW 4 Hrs

1.1 Concept and types of new media

1.2 Models and characteristics of new media marketing

1.3 Thinking models in new media marketing

1.4 Job responsibilities in new media marketing

2. NEW MEDIA MARKETING POSITIONING AND PLANNING 8 Hrs

2.1 Methods for user positioning

2.2 Methods for content positioning

2.3 Common new media channels

2.4 Marketing planning models for new media

3. NEW MEDIA COPYWRITING 8 Hrs

3.1 Features and types of new media marketing copy

3.2 Creative thinking for marketing copy

3.3 Methods for creating marketing copy

4. NEW MEDIA TEXT AND IMAGE MARKETING 18 Hrs

4.1 Methods for creating titles

4.2 Structure of content images

4.3 Text and image layout techniques

4.4 Framework for writing main content

4.5 Application of AI tools for text and image marketing

5. NEW MEDIA SHORT VIDEO MARKETING 18 Hrs

5.1 Key considerations for short video planning

5.2 Methods for content positioning in short videos

5.3 Key points for short video production

5.4 Preparatory work for short video production

5.5 Tips for creating creative short videos

6. NEW MEDIA MARKETING DATA ANALYSIS 8 Hrs

6.1 Types of new media marketing data

6.2 Tools for new media marketing data analysis

6.3 Dimensions of new media marketing data analysis

6.4 Framework for writing new media marketing data analysis reports

6.5 Multi-channel attribution and customer journey analysis methods

EC-343 NEW MEDIA MARKETING

INSTRUCTIONAL OBJECTIVES

1. NEW MEDIA MARKETING OVERVIEW

1.1 Understand the concept and types of new media

1.2 Familiarize with marketing concepts and methods in the new media era

1.3 Master common thinking models in new media marketing

1.4 Familiarize with the professional qualities and responsibilities of new media marketers

2. NEW MEDIA MARKETING PLANNING

2.1 Master methods for user positioning

2.2 Master methods for content positioning

2.3 Understand mainstream new media channels

2.4 Master marketing planning models for new media

3. NEW MEDIA COPYWRITING

3.1 Familiarize with the characteristics and types of new media marketing copy

3.2 Understand creative thinking for new media marketing copy

3.3 Master methods for creating new media marketing copy

4. NEW MEDIA TEXT AND IMAGE MARKETING

4.1 Master methods for creating titles

4.2 Familiarize with the structure of content images

4.3 Master techniques for text and image layout

4.4 Understand the framework for writing main content

5. NEW MEDIA SHORT VIDEO MARKETING

5.1 Familiarize with key considerations for short video planning

5.2 Master the characteristics and promotion methods of mainstream short video platforms

5.3 Master methods for short video content positioning

5.4 Understand the preparatory work for short video production

5.5 Master key points for short video production

5.6 Master techniques for creating creative short videos

6. NEW MEDIA MARKETING DATA ANALYSIS

6.1 Understand new media data analysis tools

6.2 Understand types of new media marketing data

6.3 Familiarize with dimensions of new media marketing data analysis

6.4 Master the framework for writing new media marketing data analysis reports

6.5 Understand multi-channel attribution and customer journey analysis methods

EC-343 NEW MEDIA MARKETING

LIST OF PRACTICALS **96 Hrs**

1. Analyze the characteristics of new media platforms
2. Research the current development status of the new media marketing industry
3. Analyze new media marketing methods
4. Research the job demand for new media marketing positions
5. New media user positioning
6. New media platform positioning
7. New media content positioning
8. Event marketing planning
9. Activity marketing planning
10. Community marketing planning
11. Product copy-writing
12. Brand copy-writing
13. Promotional copy-writing
14. Guide copy-writing
15. New media image and text production
16. New media image and text layout
17. New media in-platform promotion
18. New media out-of-platform promotion
19. Short video content planning
20. Short video design and production
21. Short video promotion
22. New media marketing performance analysis
23. New media marketing performance optimization
24. Writing new media marketing analysis reports

EC-352 LIVE STREAMING SALES

Total Contact Hours

		T	P	C
Theory	32 Hrs			
Practical	96 Hrs	**1**	**3**	**2**

LEARNING OUTCOMES: This course focuses on the full process of live streaming e-commerce operations, from initial planning, activity execution, to post-event review. It provides students with comprehensive guidance on live streaming sales. The course content covers basic knowledge of live streaming, practical skills, and integrates AI digital technology to ensure that students can stay ahead of industry trends. By the end of the course, students will have a complete understanding of live streaming e-commerce planning, preparation, execution, and performance evaluation, equipping them to become professional operators in the live streaming field.

COURSE CONTENTS

1. LIVE STREAMING MARKET ANALYSIS 4 Hrs

1.1 Classification and characteristics of mainstream live streaming platforms

1.2 SWOT analysis model

1.3 Criteria for matching live streaming platforms

1.4 Methods for selecting live streaming content formats

2. LIVE STREAMING PLANNING 6 Hrs

2.1 Principles of live streaming content planning

2.2 Product selection methods

2.3 Standards for selecting products for live streaming

2.4 Methods for extracting product selling points

2.5 Composition of the live streaming team

2.6 Types of host roles

3. LIVE STREAMING PREPARATION 4 Hrs

3.1 Content of live streaming information setup

3.2 Classification of live streaming scenes

3.3 Methods for selecting live streaming equipment
3.4 Standards for camera angle settings
3.5 Key elements of the product details page
3.6 Key elements of product descriptions

4. LIVE STREAMING PROMOTION 4 Hrs

4.1 Criteria for determining live streaming promotion channels
4.2 Key elements of live streaming soft content
4.3 Types of live streaming promotion posters
4.4 Key points for making live streaming promotion posters
4.5 Key elements of short video promotion for live streaming
4.6 Principles for checking violations

5. LIVE STREAMING EXECUTION 6 Hrs

5.1 Meaning and types of live stream openings
5.2 FAB method for extracting product selling points
5.3 Basic understanding of live stream closings
5.4 Key points for closing a live stream
5.5 Types of interactive marketing activities
5.6 Methods for handling fan questions during live streaming
5.7 Key elements of live stream management

6. LIVE STREAMING REVIEW 4 Hrs

6.1 Dimensions of live streaming data analysis
6.2 Key formulas for calculating live streaming performance data
6.3 Methods for evaluating live streaming performance
6.4 Techniques for optimizing live streaming performance
6.5 Measures for handling live stream crises
6.6 Key points for live stream crisis management
6.7 Key elements of the live stream review report

7. AI DIGITAL LIVE STREAMING 4 Hrs

7.1 Key elements of digital human host image planning
7.2 Key elements of live stream scripts
7.3 Process for setting up a digital human live stream
7.4 Real-time monitoring elements for live streaming sales

EC-352 LIVE STREAMING SALES

INSTRUCTIONAL OBJECTIVES

1. LIVE STREAMING MARKET ANALYSIS

1.1 Understand the classification and characteristics of mainstream live streaming platforms

1.2 Master the SWOT analysis model

1.3 Familiarize with live streaming platform matching criteria

1.4 Master the methods for selecting live streaming content formats

2. LIVE STREAMING PLANNING

2.1 Understand the principles of live streaming content planning

2.2 Master the product selection methods

2.3 Familiarize with live streaming product selection standards

2.4 Master the methods for extracting product selling points

2.5 Understand the composition of the live streaming team

2.6 Familiarize with the types of hosts

3. LIVE STREAMING PREPARATION

3.1 Understand the content of live streaming information setup

3.2 Familiarize with live streaming scene classifications

3.3 Master the methods for selecting live streaming equipment

3.4 Familiarize with camera angle setting standards

3.5 Master the key elements of product details page

3.6 Master the key elements of product descriptions

4. LIVE STREAMING PROMOTION

4.1 Understand the criteria for determining live streaming promotion channels

4.2 Familiarize with the key elements of live streaming soft content

4.3 Familiar with the types of live streaming promotion posters

4.4 Master the key points for making live streaming promotion posters

4.5 Master the key elements of short video promotion for live streaming

4.6 Understand the principles for checking violations

4.7 Master the methods and selection of traffic channels

4.8 Familiarize with the standards for evaluating traffic generation effects

5. LIVE STREAMING EXECUTION

5.1 Understand the meaning and types of live stream openings

5.2 Master the FAB method for extracting product selling points

5.3 Understand the meaning of live stream closings

5.4 Master the key points for closing a live stream

5.5 Familiar with types of interactive marketing activities

5.6 Master the methods for handling fan questions during live streaming

5.7 Understand the key elements of live stream management

6. LIVE STREAMING COST CONTROL

6.1 Understand the components of live streaming costs

6.2 Master the methods for budgeting live streaming costs

6.3 Familiarize with strategies for controlling live streaming costs

7. LIVE STREAMING REVIEW

7.1 Understand the dimensions of live streaming data analysis

7.2 Master the key data calculation formulas

7.3 Familiar with live streaming effect evaluation methods

7.4 Master techniques for optimizing live streaming effects

7.5 Understand live streaming crisis management measures

7.6 Master live streaming crisis management precautions

7.7 Familiar with the key elements of live streaming review reports

8. AI DIGITAL HUMAN LIVE STREAMING

8.1 Master the elements of digital human host image planning

8.2 Master the key elements of live streaming scripts

8.3 Understand the content of setting up a digital human live streaming room

8.4 Familiar with real-time monitoring elements of live streaming sales

EC-352 LIVE STREAMING SALES

LIST OF PRACTICALS **96 Hrs**

1. Live streaming market evaluation
2. Live streaming platform selection
3. Live streaming content positioning
4. Live streaming content planning
5. Live streaming product selection
6. Live streaming product pricing
7. Live streaming team configuration
8. Host role planning
9. Live streaming information setup
10. Live streaming scene setup
11. Live streaming equipment debugging
12. Live streaming details page setup
13. Live streaming promotion strategy development
14. Writing live streaming soft articles
15. Live streaming poster creation
16. Violation information inspection
17. Live streaming opening
18. Live streaming product sales
19. Live streaming closing
20. Live streaming interaction
21. Live streaming room management
22. Live streaming data collection and analysis
23. Live streaming effect evaluation and optimization
24. Live streaming crisis management and public relations
25. Digital human host image ip positioning
26. Digital human live streaming script configuration
27. Digital human live streaming room setup
28. Live streaming sales and real-time monitoring

EC-363 CUSTOMER SERVICE AND MANAGEMENT

Total Contact Hours

Theory	64 Hrs	**T**	**P**	**C**
Practical	96 Hrs	**2**	**3**	**3**

LEARNING OUTCOMES: This course aims to develop students' comprehensive customer service skills by analyzing the job requirements in the field and focusing on the skills needed for hybrid roles in technical positions. The course uses actual work projects as teaching tools. The content covers key modules such as intelligent reception and consultation, facilitating customer transactions, handling customer issues, maintaining customer relationships, relationship marketing, and customer service data analysis and optimization. The goal is to enhance students' professional skills and practical capabilities in customer service.

COURSE CONTENTS

1. INTELLIGENT CUSTOMER SERVICE CONSULTATION 8 Hrs

1.1 Meaning of intelligent customer service

1.2 Functions of intelligent customer service

1.3 Work logic of intelligent customer service

1.4 Method for building product knowledge base

1.5 Intelligent customer service q&a configuration scenarios

1.6 Methods for training and optimizing intelligent customer service

2. CUSTOMER TRANSACTION ENABLEMENT 12 Hrs

2.1 Product recommendation methods

2.2 Product recommendation copy-writing methods

2.3 Key points for activity recommendations

2.4 Types of cross-selling

2.5 Reasons for unpaid orders

2.6 Methods for payment reminders

3. CUSTOMER ISSUE HANDLING 12 Hrs

3.1 Common types of abnormal orders

3.2 Methods for handling abnormal orders

3.3 Common reasons for returns and exchanges

3.4 Methods for handling returns and exchanges

3.5 Types of after-sales disputes

3.6 Methods for handling after-sales disputes

3.7 Types of customer reviews

3.8 Methods for handling negative and neutral reviews

3.9 Intelligent customer issue handling tools

4. CUSTOMER RELATIONSHIP MAINTENANCE 10 Hrs

4.1 Types of customer data

4.2 Channels for collecting customer data

4.3 Meaning of customer profiles

4.4 Types of customer tags

4.5 Methods for customer segmentation

4.6 Precautions for customer segmentation

5. CUSTOMER RELATIONSHIP MARKETING 12 Hrs

5.1 Characteristics of new customers

5.2 New customer marketing strategies

5.3 Types of existing customers

5.4 Methods for marketing to existing customers

5.5 Key points for designing membership systems

5.6 Methods for membership marketing

5.7 Elements of fan marketing

6. CUSTOMER SERVICE DATA ANALYSIS AND OPTIMIZATION 10 Hrs

6.1 Customer service data analysis metrics

6.2 Methods for customer service data analysis

6.3 Pre-sale customer service optimization methods

6.4 Post-sale customer service optimization methods

6.5 Intelligent customer service optimization methods

EC-363 CUSTOMER SERVICE AND MANAGEMENT

INSTRUCTIONAL OBJECTIVES

1. INTELLIGENT CUSTOMER SERVICE CONSULTATION

1.1 Understand the meaning and main functions of intelligent customer service

1.2 Familiarize with the work logic of intelligent customer service

1.3 Master the method for building product knowledge bases

1.4 Understand intelligent customer service Q&A configuration scenarios

1.5 Master the methods for training and optimizing intelligent customer service

2. CUSTOMER TRANSACTION ENABLEMENT

2.1 Familiarize with customer needs analysis methods

2.2 Understand product recommendation scenarios

2.3 Master product recommendation copywriting methods

2.4 Familiarize with promotional activity types

2.5 Master activity recommendation techniques

2.6 Familiarize with cross-selling methods

2.7 Master cross-selling design methods

2.8 Familiarize with order payment reminder precautions

2.9 Master payment reminder methods

3. CUSTOMER ISSUE HANDLING

3.1 Familiarize with common types of abnormal orders

3.2 Master methods for handling abnormal orders

3.3 Understand common reasons for returns and exchanges

3.4 Master methods for handling returns and exchanges

3.5 Familiarize with types of after-sales disputes

3.6 Master methods for handling after-sales disputes

3.7 Master methods for handling customer reviews

3.8 Familiarize with the process for handling intelligent customer issues

4. CUSTOMER RELATIONSHIP MAINTENANCE

4.1 Understand types of customer data

4.2 Master customer data collection channels

4.3 Understand the meaning of customer profiles

4.4 Familiarize with commonly used customer profile tags

4.5 Familiarize with customer classification criteria

4.6 Master customer classification methods

5. CUSTOMER RELATIONSHIP MARKETING

5.1 Understand characteristics of new customers

5.2 Master new customer marketing strategies

5.3 Familiarize with types of existing customers

5.4 Master marketing methods for existing customers

5.5 Master membership system content design

5.6 Understand membership marketing techniques

5.7 Master membership marketing methods

6. CUSTOMER SERVICE DATA ANALYSIS AND OPTIMIZATION

6.1 Familiarize with customer service data analysis metrics

6.2 Master customer service data analysis methods

6.3 Master pre-sale customer service optimization techniques

6.4 Master post-sale customer service optimization techniques

6.5 Understand methods for optimizing intelligent customer service

EC-363 CUSTOMER SERVICE AND MANAGEMENT

LIST OF PRACTICALS **96 Hrs**

1. Building a product knowledge base
2. Analyzing customer consumption psychology
3. Configuring store welcome messages
4. Configuring chat interaction scenarios
5. Configuring product q&a scenarios
6. Configuring after-sales service scenarios
7. Product recommendations
8. Event recommendations
9. Affiliate marketing
10. Order payment follow-up
11. Handling abnormal orders
12. Handling returns and exchanges
13. Handling after-sales disputes
14. Handling after-sales reviews
15. Collecting customer data
16. Analyzing customer profiles
17. Customer segmentation
18. New customer marketing
19. Existing customer marketing
20. Membership marketing
21. Fan marketing
22. Customer service data analysis
23. Optimizing customer service performance

EC-372 SUPPLY CHAIN MANAGEMENT

Total Contact Hours

Theory	32 Hrs	**T**	**P**	**C**
Practical	96 Hrs	**1**	**3**	**2**

LEARNING OUTCOMES: This course focuses on practicality, closely integrating theoretical knowledge with actual skills. Through case analysis, organizational frameworks, flowcharts, calculation methods, and detailed operational steps, students will be able to apply what they've learned in real-world scenarios. The course design emphasizes developing students' hands-on abilities, enabling them to effectively address challenges encountered in supply chain planning, procurement, production, and logistics management. Students will acquire the basic skills needed to analyze and solve these issues. By completing this course, students will enhance their professional skills and lay a solid foundation for their future careers.

COURSE CONTENTS

1. SUPPLY CHAIN MANAGEMENT AWARENESS 2 Hrs

1.1 Overview of supply chain

1.2 Overview of supply chain management

1.3 Evolution of the supply chain

1.4 Future development of supply chain management

2. SUPPLY CHAIN PLANNING MANAGEMENT 6 Hrs

2.1 Meaning of supply chain planning management

2.2 Methods for supply chain demand analysis

2.3 Methods for supply chain demand forecasting

2.4 Methods for intelligent inventory control

3. SUPPLY CHAIN PROCUREMENT MANAGEMENT 6 Hrs

3.1 Meaning of supply chain procurement management

3.2 Contents of supply chain procurement planning

3.3 Methods for supplier selection

3.4 Strategies for Supplier Management

4. SUPPLY CHAIN PRODUCTION MANAGEMENT 4 Hrs

4.1 Meaning of supply chain production management

4.2 Contents of supply chain production planning

4.3 Strategies for supply chain production control

5. SUPPLY CHAIN LOGISTICS MANAGEMENT 6 Hrs

5.1 Meaning of supply chain logistics management

5.2 Key points of supply chain logistics outsourcing

5.3 Considerations for supply chain distribution network design

5.4 Key points of supply chain transportation management

5.5 Process of reverse logistics operations

6. SUPPLY CHAIN RISK MANAGEMENT 4 Hrs

6.1 Meaning of intelligent supply chain risk management

6.2 Types of supply chain risks

6.3 Methods for identifying supply chain risks

6.4 Methods for intelligent risk forecasting and early warning

6.5 Measures for preventing supply chain risks

7. SUPPLY CHAIN PERFORMANCE MANAGEMENT 4 Hrs

7.1 Meaning of supply chain performance management

7.2 Methods for supply chain performance management

7.3 Key performance indicators for supply chain performance evaluation

EC-372 SUPPLY CHAIN MANAGEMENT

INSTRUCTIONAL OBJECTIVES

1. SUPPLY CHAIN MANAGEMENT AWARENESS

1.1 Understand the meaning and types of supply chains

1.2 Familiarize with the meaning and content of supply chain management

1.3 Understand the evolution of supply chains

1.4 Familiarize with the current status of supply chain management

1.5 Familiarize with the future development trends of supply chain management

2. SUPPLY CHAIN PLANNING MANAGEMENT

2.1 Understand the meaning of supply chain planning management

2.2 Master methods for supply chain demand analysis

2.3 Master methods for supply chain demand forecasting

2.4 Master key points of customer order analysis

2.5 Master methods for intelligent inventory control

3. SUPPLY CHAIN PROCUREMENT MANAGEMENT

3.1 Understand the meaning of supply chain procurement management

3.2 Familiarize with the content of supply chain procurement planning

3.3 Master techniques for formulating supply chain procurement plans

3.4 Master the methods of Just-in-Time (JIT) procurement

3.5 Master methods for supplier selection

3.6 Master methods for supplier evaluation

3.7 Master strategies for supplier management

4. SUPPLY CHAIN PRODUCTION MANAGEMENT

4.1 Understand the meaning of supply chain production management

4.2 Master the content of supply chain production planning

4.3 Familiarize with methods for formulating supply chain production plans

4.4 Master the content of supply chain production control

4.5 Master methods for supply chain production control

5. SUPPLY CHAIN LOGISTICS MANAGEMENT

5.1 Understand the meaning of supply chain logistics management

5.2 Master key points of supply chain logistics outsourcing

5.3 Master considerations for supply chain distribution network design

5.4 Master key points of supply chain transportation management

5.5 Familiarize with the process of reverse logistics operations

5.6 Master the content of supply chain warehousing management

6. SUPPLY CHAIN RISK MANAGEMENT

6.1 Understand the meaning of intelligent supply chain risk management

6.2 Familiarize with the types of supply chain risks

6.3 Master methods for identifying supply chain risks

6.4 Master methods for intelligent risk forecasting and early warning

6.5 Familiarize with measures for preventing supply chain risks

7. SUPPLY CHAIN PERFORMANCE MANAGEMENT

7.1 Understand the meaning of supply chain performance management

7.2 Master methods for supply chain performance management

7.3 Familiarize with key performance indicators for supply chain performance evaluation

EC-372 SUPPLY CHAIN MANAGEMENT

LIST OF PRACTICALS **96 Hrs**

1. Research the current status of supply chain management
2. Analyze the development trends of supply chain management
3. Supply chain demand forecasting
4. Supply chain customer RFM segmentation
5. Inventory ABC classification management
6. Supplier selection and evaluation
7. Supplier classification management
8. Production planning preparation
9. Production schedule control
10. Supply chain transportation management
11. Supply chain warehousing operations
12. Logistics outsourcing management
13. Logistics cost analysis
14. Supply chain risk identification and prevention
15. Supply chain performance management

EC-382 COMPREHENSIVE PRACTICE IN E-COMMERCE OPERATIONS

Total Contact Hours	**T**	**P**	**C**
Practical 192 Hrs	**0**	**6**	**2**

LEARNING OUTCOMES: This practical course simulates the e-commerce environment and employs zero-sum game methods to provide students with a platform close to real business simulation. On this platform, students can engage in multiple rounds of market data analysis, setting up online stores, promotions, and operations. Through these hands-on activities, students will not only gain a deep understanding of the basic concepts and operational mechanisms of e-commerce but also enhance their market insight and business decision-making skills, laying a solid foundation for their future work and entrepreneurship in the e-commerce field.

LIST OF PRACTICALS **192 Hrs**

1. Market data analysis
2. Online store setup and decoration
3. Product selection and procurement
4. Product inbound
5. Product listing
6. Product listing and removal
7. On-site SEO optimization
8. On-site SEM promotion
9. Product promotion
10. Off-site promotion
11. Order distribution
12. Logistics selection
13. Goods outbound
14. Operational data analysis
15. Financial data analysis
16. Operational plan optimization

DAE E-Commerce

Employability of DAE Pass-Outs with Market Designations and Vertical Progression

Employment Opportunities DAE (E-Commerce) graduates have a wide range of job opportunities in today's digital economy. They can find employment in:

- E-Commerce Companies & Online Marketplaces
- Digital Marketing Agencies
- Retail and Wholesale Businesses (with Online Operations)
- Government and Private Sector IT/E-Business Departments
- Freelancing / Self-Employment in Digital Services & Online Business

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Employers' Expectations from DAE E-Commerce Graduates

Employers generally seek candidates who are equipped with both technical and business-oriented skills:

💻 Technical Skills

- E-Commerce Platforms: Shopify, WooCommerce, Daraz, Amazon
- Website Management using CMS (e.g., WordPress)
- Basic Web Development: HTML, CSS, JavaScript
- Digital Payment Systems & Online Security
- Data Management & Analytics (Google Analytics, Excel)

📈 Business & Marketing Skills

- Understanding of Online Buying/Selling Processes
- Digital Marketing Techniques (SEO, SEM, Email Marketing)
- Social Media Marketing (Facebook, Instagram, TikTok, LinkedIn)
- Product Listing & Optimization on Online Stores
- Customer Relationship Management (CRM) Tools

🛠️ Practical E-Commerce Skills

- Order Management & Fulfillment
- Online Customer Support
- Content Creation for Digital Platforms
- Knowledge of Logistics & Supply Chain in E-Commerce

- Basic Graphic Design (Canva, Adobe Photoshop - optional)

Initial Job Roles for DAE E-Commerce Graduates

Graduates can start their careers in various roles, such as:

- E-Commerce Assistant
- Online Store Manager (Entry-Level)
- Digital Marketing Assistant
- Social Media Coordinator
- Product Lister / Catalog Executive
- Customer Support Representative
- Freelance Virtual Assistant for E-Businesses

Vertical Career Progression in the Public/Private Sector

Career growth may follow this path:

- E-Commerce Assistant / Data Entry Staff
- Digital Marketing Executive / Web Coordinator
- Online Sales & Operations Manager
- E-Commerce Strategist / Business Development Executive
- Digital Marketing Manager / E-Commerce Project Lead
- Head of E-Commerce / Entrepreneur

Career Opportunities Overview

- TVET Sector:
  Graduates can pursue roles as Junior Instructors or Lab Technicians in business and IT-related programs, with career growth potential up to Chief Instructor.
- Industry Roles:
  They may be employed in roles such as Online Sales Coordinator, Product Manager, Social Media Marketer, and Customer Experience Specialist in a wide range of industries.
- Entrepreneurship:
  DAE E-Commerce holders can launch their own online stores, offer freelance digital services, or manage e-businesses on platforms like Daraz, Amazon, or Shopify—building respected careers in the rapidly growing digital economy.

Minimum Qualification for Teacher/Instructor/ Jr. Instructor

Post	Qualification	Relevant Experience
Jr. Instructor	DAE Computer Information Technology/ DAE ICT / DAE Software Technology	4 Years
Instructor	BS- (IT/ CS/ Cyber Security/ Artificial Intelligence / Information Security / IOT/ Digital Marketing) BS Software Engineering/ Computer System Engineering	2 Years
Instructor	MS- (IT/ CS/ IOT) MS Software Engineering	NIL

For Subjects pertaining to Humanities / Related Studies /Management / IT

- BS / M.A (16 years or higher) degree in English / Islamite / Pak Studies with 2 years of teaching experience
- BS / M.Sc. (16 years or higher) degree in IT / CS / SE or BS in Computer Engineering with 2-years of teaching experience
- BS / M.Sc. (16 years or higher) degree in Mathematics / Physics / Chemistry with 2-years of teaching experience
- BBA / MBA (16 years or higher) degree with 2-years of teaching experience