



# **Bachelor of Commerce**

## **Banking and Investment Management**

# Bachelor of Commerce – Banking and Investment Management

## MISSION STATEMENT

*The Bachelor of Commerce in Banking and Investment Management program at Springfield Research University (SRU) is dedicated to developing skilled professionals who excel in the financial services industry. Through rigorous academic standards, practical training, and ethical leadership, our graduates contribute to effective financial management, investment strategies, and sustainable economic growth.*

Our mission is built upon three core pillars:

### 1. Academic Excellence:

- We maintain high standards, fostering critical thinking and intellectual growth.
- Students engage in coursework, practical exercises, and evidence-based practices to excel in the complex field of banking and investment management.
- They gain a solid foundation in financial analysis, risk assessment, and portfolio management.

### 2. Cutting-Edge Research:

- Our faculty and students actively contribute to advancing financial practices.
- By addressing real-world challenges, exploring innovative investment concepts, and shaping industry practices, we drive positive change within the field.
- Students participate in research projects, simulations, and experiments, enhancing their ability to provide effective financial solutions.

### 3. Societal Impact:

- We recognize our responsibility to society and the global economy.
- Graduates are not only skilled bankers and investment professionals but also ethical leaders who advocate for financial stability, sustainability, and responsible investment practices.
- They make meaningful contributions to economic development, wealth creation, and financial well-being.

The Bachelor of Commerce in Banking and Investment Management program prepares graduates for productive careers and responsible citizenship. Our focus is primarily on equipping students to navigate the dynamic world of finance. Here's how we achieve this:

### 1. Foundational Knowledge:

- Students delve into core subjects such as financial markets, banking regulations, and investment analysis.
- These foundational principles provide essential groundwork for understanding financial instruments, risk management, and economic trends.

### 2. Applied Learning:

- Lectures and practical sessions correlate theoretical knowledge with real-world financial scenarios.
- For instance, students learn about investment strategies and immediately apply them during hands-on exercises related to portfolio construction.

### **3. Case-Based Approach:**

- Real-world financial cases serve as powerful teaching tools.
- Students analyze investment requirements, design investment portfolios, and consider regulatory implications, bridging theory and practice.

### **4. Industry Collaborations and Internships:**

- During industry placements and internships, students work directly with financial professionals.
- They apply theoretical knowledge in managing investment portfolios, assessing risk, and providing financial advice.

### **5. Cutting-Edge Practices:**

- Students critically evaluate industry best practices, explore emerging technologies, and contribute to advancements in banking and investment management.
- This integration of evidence-based approaches ensures that knowledge aligns with current industry standards.

By seamlessly weaving theory, practical experiences, and evidence-based approaches, our program prepares graduates to contribute effectively to the dynamic field of banking and investment management. They play a vital role in financial institutions, investment firms, and economic development, shaping the future of global finance.

## **RATIONALE FOR THE BACHELOR OF COMMERCE IN BANKING AND INVESTMENT MANAGEMENT**

At Springfield Research University, our Bachelor of Commerce in Banking and Investment Management program is meticulously crafted to empower students for impactful careers in the dynamic world of finance. Rooted in academic excellence, this program equips students with essential knowledge, practical skills, and hands-on experience. By emphasizing evidence-based practices and innovation, our graduates emerge as savvy financial strategists poised to shape investment landscapes, drive economic growth, and unlock financial futures.

### **National Needs (Eswatini):**

#### **1. Quantitative Expertise:**

- Eswatini demands skilled professionals who can navigate complex financial scenarios.
- The program equips students with mathematical proficiency and critical thinking abilities to assess investment opportunities effectively.

#### **2. Cutting-Edge Practices:**

- Graduates advocate for evidence-based decision-making, ensuring cost efficiency, safety, and equitable treatment in financial services.
- By enhancing their understanding of financial markets, risk management, and investment analysis, they contribute to better financial outcomes.

### **3. Policy and Innovation:**

- The program fosters critical thinking, enabling graduates to engage in research, policy formulation, and informed decision-making at the national level.

## **Regional Needs (Southern African Development Community - SADC):**

### **1. Harmonization of Practices:**

- SADC member states face common challenges in financial regulation and investment management.
- The program aligns with SADC's goal of harmonizing financial frameworks, promoting cooperation, and advancing sound financial practices.

### **2. Human Capital Development:**

- Finance professionals play a pivotal role in regional economies, infrastructure projects, and wealth creation.
- The program contributes to building a skilled workforce capable of addressing cross-border financial complexities.

### **3. Technological Advancements:**

- SADC's prosperity relies on informed financial practices.
- Our graduates contribute to maintaining financial stability, resolving challenges, and fostering regional well-being.

## **Purpose of the Program:**

### **1. Technical Leadership:**

- The program educates ethical leaders who champion evidence-based practices, fairness, and financial transparency.
- Graduates not only assess financial data but also shape policies, regulations, and investment protocols.

### **2. Innovative Research:**

- Students engage in specialized research, addressing contemporary financial challenges and contributing to technological advancements.

By seamlessly weaving theory, practical experiences, and evidence-based approaches, our program prepares graduates to contribute effectively to the dynamic field of banking and investment management. They are the architects of financial prosperity, navigating global markets, managing portfolios, and shaping economic destinies. Welcome to a world where financial expertise meets limitless possibilities.

## PROGRAMME LEARNING OBJECTIVES

The learning objectives of our banking and investment management program are designed to equip students with the following essential competencies:

1. **Comprehensive Industry Understanding:** Develop a deep understanding of the banking and investment management industry, including its functions, regulations, and evolving trends.
2. **Foundational Knowledge:** Acquire knowledge in accounting, economics, and business management principles, providing a solid base for financial decision-making.
3. **Regulatory Awareness:** Gain insights into the regulatory framework governing financial services, ensuring compliance and ethical practices.
4. **Financial Statement Analysis:** Learn to analyze financial statements critically, enabling informed investment decisions.
5. **Risk Management:** Understand the risks associated with various investment types and learn effective risk management strategies.
6. **Application of Financial Models:** Apply financial models and tools to real-world scenarios, preparing for practical challenges in the field.

## PROGRAMME LEARNING OUTCOMES

Upon successful completion of this program, students will be equipped to:

1. **Management and Leadership Awareness:** Demonstrate a keen understanding of the management and leadership competencies essential for operating in both local and international business environments.
2. **Effective Operations Strategy:** Exhibit awareness of the critical components that contribute to an effective operations strategy within a business context.
3. **Economic Theory and Business Implications:** Understand essential economic theories and their practical implications for managerial decision-making and business practices.
4. **Conducting Business Research:** Conduct business research under appropriate supervision, applying rigorous methodologies and contributing to the advancement of knowledge in a business environment.

## ENTRY REQUIREMENTS

The student must have 6 passes in SGCSE/GCE/IGCSE O' Level including a pass with Grade C or better in English Language and Mathematics. **Special:** A' Level from any of the following: Accounting, Business Studies, Siswati and Geography. **Recognition of Prior Learning (RPL) Applications:** SRU admits a small number of students onto the program via Recognition of Prior Learning. Applicants interested in applying via RPL will be considered individually by the relevant committee.

## **CAREER OPPORTUNITIES**

### **1. Private and Commercial Banking:**

- Work directly with clients, managing their accounts, providing financial advice, and facilitating transactions.
- Roles include relationship managers, branch managers, and credit analysts.

### **2. Asset Management:**

- Dive into investment portfolios, analyzing market trends, and optimizing returns for clients.
- Opportunities exist as portfolio managers, investment analysts, and wealth advisors.

### **3. Corporate Finance:**

- Join finance teams within corporations, handling financial planning, budgeting, and capital structure.
- Roles include financial analysts, treasury managers, and corporate controllers.

### **4. Financial Planning:**

- Guide individuals and families toward their financial goals.
- Become a certified financial planner (CFP) or financial advisor.

### **5. Investment Banking:**

- Dive into high-stakes deals, mergers, acquisitions, and capital raising.
- Roles include investment bankers, analysts, and associates.

### **6. Money Management:**

- Manage investment funds, hedge funds, or mutual funds.
- Opportunities as fund managers or research analysts.

### **7. Life Insurance:**

- Help clients protect their financial future through life insurance products.
- Roles include underwriters, claims adjusters, and insurance agents.

### **8. Research and Planning:**

- Dive into market research, economic analysis, and financial modeling.
- Opportunities in research firms, think tanks, and economic consulting.

### **9. Retirement Funding:**

- Assist individuals in planning for retirement.
- Roles include retirement advisors and pension fund managers.

### **10. Real Estate:**

- Explore property investment, development, and financing.

- Opportunities as real estate analysts, brokers, or property managers.

### **The Bachelor's Degree shall:**

The Bachelor's degree program in Banking and Investment Management at Springfield Research University is designed to equip students with the skills and knowledge necessary for a successful career in this dynamic field. Here are the key features of our program:

#### **1. Duration:**

- The program spans **four years** for full-time students or **six years** for part-time students, including an industrial attachment or internship period.

#### **2. Semester Structure:**

- Each academic year consists of **two semesters**.
- **Semester Duration:** Each semester runs for **20 weeks**.
  - **Orientation Week:** One week dedicated to orientation.
  - **Teaching Weeks:** A minimum of **14 weeks** for instruction.
  - **Mid-Semester Break:** A one-week break for students.
  - **Examination Period:** Two weeks for final exams.
  - **Results Processing:** Two weeks allocated for marking and result processing.

Our program ensures a rigorous academic experience while allowing flexibility for part-time students. Students engage in hands-on learning, theoretical coursework, and practical projects, preparing them for the exciting challenges of the Banking and Investment industry.

### **Special Departmental Regulations**

#### **1. Course Completion Requirements:**

- All **Core, Prerequisite, Required, General, and Elective** courses within the degree program are compulsory. Students must pass these courses with a minimum grade of **50%** to graduate.
- However, during the third and fourth years, all courses must be passed with a minimum grade of **60%** (equivalent to a CGPA of **3.00**) to qualify for graduation.

#### **2. Optional Courses:**

- Optional courses do not contribute to the final grade. Their marks are excluded from the computation of the overall grade.

#### **3. Externalization of Courses:**

- All courses within the degree programs must be completed internally. Externalization is not permitted.

#### **4. Quality Control and Evaluation:**

- Regular academic audits and reviews occur every four years, overseen by external moderators. Internal program evaluation is ongoing.

#### 5. **Competence and Preparation:**

- The courses offered in the Bachelor of Commerce in Banking and Investment Management program provide adequate competences, preparing students for professional practice at the required academic level.

#### 6. **Core and Prerequisite Courses:**

- Students must pass all Core and Prerequisite courses with a minimum grade of **50%** before progressing to the next level or enrolling in additional courses.

### **Degree Award and Classification**

- Upon successful completion of all **Core**, **Required**, and **Education** courses, as well as meeting the program requirements, a student will be awarded the degree of **Bachelor of Commerce in Banking and Investment Management** at the end of the final year.
- The **normal classification** of a Bachelor's Degree is determined based on the academic performance during the third and fourth years of study.

### **Rationale to Course Numbering**

At Springfield Research University, we meticulously design our Banking and Investment Management curriculum to empower students with the knowledge and skills needed to thrive in this dynamic field. Our course numbering system serves as a roadmap, guiding students through their academic journey - **\*\*100-level courses\*\*** introduce foundational concepts. - **\*\*200-level courses\*\*** build on those foundations. - **\*\*300-level courses\*\*** explore more specialized topics. - **\*\*400-level courses\*\*** are advanced and often include research or project components. Let's delve into the reasons behind our thoughtful approach:

1. **Logical Progression:** Our course numbers reflect a logical progression. Foundational concepts begin with the "100" series, followed by deeper explorations in the "200" and "300" levels. Advanced topics and research opportunities reside in the "400" series.
2. **Prerequisites and Coherence:** Clear numbering helps students understand prerequisites and co-requisites. For instance, a 200-level course assumes knowledge from related 100-level courses, ensuring a coherent learning experience.
3. **Specialization and Depth:** As students advance, higher-level courses delve into specialized areas such as derivatives, financial markets, and retail banking. The numbering system communicates this depth of study.
4. **Alignment with Program Goals:** Each course number aligns with our program's learning outcomes. Whether it's mastering derivatives or diving into retail banking, students can track their progress.
5. **Transferability:** Consistent numbering facilitates credit transfer between institutions, supporting seamless academic mobility.



In summary, our course numbering isn't just a sequence—it's a deliberate framework that enhances learning, fosters curiosity, and prepares our students for impactful careers in Banking and Investment. Banking and Investment Management courses simplifies the course numbering system.

**1. 100-Level Courses:**

- **BIM 101:** Introduction to Banking and Investment
- **BIM 110:** Linear Algebra
- **BIM 120:** The Mechanics Banking

**2. 200-Level Courses:**

- **BIM 201:** Introduction to Wealth Management
- **BIM 210:** Introduction to Accounting - II
- **BIM 220:** Introduction to Financial Markets

**3. 300-Level Courses:**

- **BIM 301:** Cost & Management Accounting
- **BIM 310:** Fundamentals of Capital Market
- **BIM 320:** Financial Services

**4. 400-Level Courses:**

- **BIM 401:** Direct Taxation
- **BIM 410:** Fundamentals of Equity Market
- **BIM 420:** Financial Derivatives

The Bachelor of Commerce in Banking and Investment Management is a four (4) program. The student is expected to accumulate 376 credit points to be considered to have met the requirements of the Bachelor of Commerce in Banking and Investment Management and must pass each module by at least 50%.

- Level 1 = minimum of credits 96 (960 notional hours of study)
- Level 2 = minimum of credits 96 (960 notional hours of study)
- Level 3 = minimum of credits 88 (9600 notional hours of study)
- Level 4 = minimum of credits 96 (960 notional hours of study)

**TOTAL credit points 3760 (3760 notional hours of study)**

**Credit Transfer and Accumulation**

1. Credits are derived from engagement of students in learning activities during lectures, seminars, tutorials, micro or macro field trips, directed and self-directed learning and writing examination tests and assignments.

2. Modules from the arts and law faculty are worth 8 credit. Lecture attendance is compulsory. Students who attend less than 80% of lessons will not be allowed to sit for their sessional examinations.

### Weighting

The degree class shall be based on weighting the results from part 1, 2, 3, and 4, the Degree weighting shall be as follows:

Level 1	20%
Level 2	20%
Level 3	30%
Level 4	30%

### Distribution of Notional Hours

Module	Lecture Hrs	Tutorials/Seminars	Self-Directed Study	Assignment Tests/Exams	Notional Hrs	Credits
BIM000	36	10	17	17	80	8
PROJECT	0	0	40	40	80	8

### ASSESSMENT METHODS

#### 1. Formative Assessment (30%):

- **Class Participation:** Actively engage in discussions, seminars, and activities related to banking and investment management.
- **Quizzes and Short Tests:** Regular assessments on specific topics relevant to finance, banking, and investment.
- **Draft Assignments:** Receive feedback on early assignment drafts related to financial analysis and investment strategies.
- **Peer Review:** Collaborate with peers to review and improve each other's financial reports and investment proposals.

#### 2. Summative Assessment (60%):

- **Final Examinations:** Comprehensive exams covering course content specific to banking, financial markets, and investment principles.
- **End-of-Semester Papers:** Assess students' knowledge and analytical skills related to investment management and financial decision-making.
- **Oral Presentations:** Evaluate communication abilities within the context of financial presentations and investment pitches.

- **Mock Investment Portfolios or Trading Simulations:** Simulate real-world investment scenarios.

### 3. Continuous Assessment (10%):

- **Assignments and Projects:** Regular tasks contribute to the overall grade, emphasizing practical skills in financial analysis, portfolio management, and risk assessment.
- **Internships or Work Placements:** Evaluate performance in financial institutions, investment firms, or related placements.
- **Research Papers:** Demonstrate research abilities related to financial markets, investment strategies, or economic trends.
- **Attendance and Active Participation:** Engage students in lectures, workshops, and industry events related to banking and investment.

These adapted assessment methods align with our commitment to academic excellence and the development of competent professionals in banking and investment management.

## Teaching Methods

At Springfield Research University (SRU), we are committed to employing a diverse array of teaching methods to ensure a comprehensive and engaging learning experience for our students. Our teaching methods are carefully selected to align with the programme's objectives and to meet the needs of our diverse student body. The following are the key teaching methods utilized across all SRU programmes:

### 1. Lectures:

- Lectures are used to introduce and explain key concepts, theories, and principles. They provide a structured and systematic approach to delivering content, allowing students to gain a solid foundation in their respective fields. Lectures are often supplemented with visual aids, multimedia presentations, and interactive elements to enhance understanding and engagement.

### 2. Seminars:

- Seminars are interactive sessions that promote critical thinking and in-depth discussion on specific topics. Students are encouraged to actively participate, share their perspectives, and engage in debates. Seminars provide an opportunity for students to develop their analytical and communication skills.

### 3. Workshops:

- Workshops are hands-on sessions that focus on practical skills and applications. These sessions allow students to engage in experiential learning, apply theoretical knowledge to real-world scenarios, and collaborate with peers on projects and activities. Workshops are designed to foster creativity, problem-solving, and teamwork.

### 4. Problem-Based Learning (PBL):

- Problem-Based Learning is a student-centered approach that involves presenting students with complex, real-world problems to solve. Students work in small groups to

research, discuss, and propose solutions, developing critical thinking and collaborative skills in the process. PBL encourages independent learning and active engagement.

#### **5. Case Studies:**

- Case studies are used to analyze real-life situations and decision-making processes. Students examine and discuss case studies to understand the context, identify key issues, and evaluate possible solutions. This method helps students develop their analytical and problem-solving abilities while relating theoretical concepts to practical situations.

#### **6. Clinical Practice:**

- For programmes that include a clinical component, such as Health and Medical Sciences, clinical practice is an integral part of the curriculum. Students gain hands-on experience in clinical settings, working under the supervision of qualified professionals. This method provides valuable opportunities for students to apply their knowledge, develop clinical skills, and gain insights into professional practice.

#### **7. Research Projects:**

- Research projects are designed to cultivate a culture of inquiry and innovation. Students engage in independent or group research projects, exploring topics of interest and contributing to the body of knowledge in their field. Research projects develop students' research skills, critical thinking, and ability to communicate findings effectively.

#### **8. Online Learning:**

- Online learning is incorporated to provide flexible and accessible education. SRU utilizes online platforms to deliver lectures, conduct discussions, and facilitate collaborative projects. Online learning allows students to access course materials, participate in virtual classrooms, and engage with peers and instructors remotely.

#### **9. Continuous Assessment:**

- Continuous assessment methods, such as quizzes, assignments, and presentations, are used to monitor students' progress and provide ongoing feedback. These assessments help identify areas for improvement and ensure that students are meeting learning objectives throughout the course.

#### **10. Peer Learning:**

- Peer learning encourages students to collaborate and learn from each other. Group projects, study groups, and peer review sessions provide opportunities for students to share knowledge, offer feedback, and support each other's learning journey.

At SRU, our commitment to employing diverse and effective teaching methods ensures that our students receive a well-rounded education that prepares them for success in their chosen fields. We continuously review and enhance our teaching practices to provide the best possible learning experience for our students.

## Delivery Methods

At Springfield Research University (SRU), we utilize a variety of delivery methods to ensure that our educational programmes are accessible, engaging, and effective. Our delivery methods are designed to cater to the diverse needs of our students and to provide flexible learning opportunities. The following are the key delivery methods employed across all SRU programmes:

### 1. In-Person Delivery:

- **Classroom Lectures:** Traditional classroom lectures provide a structured and interactive environment where students can engage with instructors and peers. These sessions often include discussions, presentations, and multimedia resources to enhance learning.
- **Laboratory Sessions:** For programmes that require practical and experimental learning, laboratory sessions are conducted in specialized labs equipped with the necessary tools and equipment. These hands-on sessions allow students to apply theoretical knowledge in a controlled environment.
- **Clinical Placements:** Health and Medical Sciences programmes include clinical placements in hospitals, clinics, and healthcare facilities. These placements provide students with real-world experience under the supervision of qualified professionals.

### 2. Online Delivery:

- **Virtual Classrooms:** Online platforms are used to deliver lectures, conduct discussions, and facilitate collaborative projects. Virtual classrooms enable students to access course materials, participate in live sessions, and engage with peers and instructors from remote locations.
- **Recorded Lectures:** Recorded lectures are made available for students to access at their convenience. This flexible approach allows students to review and revisit course content as needed.
- **Online Assessments:** Online assessments, including quizzes, assignments, and exams, are conducted through secure online platforms. These assessments provide timely feedback and help monitor students' progress.

### 3. Blended Learning:

- **Hybrid Courses:** Blended learning combines in-person and online delivery methods to provide a flexible and comprehensive learning experience. Hybrid courses may involve alternating between classroom sessions and online activities.
- **Flipped Classroom:** In the flipped classroom model, students access instructional content online before class and use in-person sessions for interactive, application-based activities. This approach encourages active learning and deeper engagement with the material.

### 4. Independent Study:

- **Self-Paced Learning:** Self-paced learning allows students to progress through course materials at their own speed. This method is ideal for students who prefer to learn independently and manage their own schedules.

- **Research Projects:** Independent research projects provide students with the opportunity to explore topics of interest, develop research skills, and contribute to the body of knowledge in their field. Faculty advisors provide guidance and support throughout the research process.

## 5. Collaborative Learning:

- **Group Projects:** Group projects foster teamwork and collaboration among students. These projects often involve problem-solving, research, and presentations, allowing students to learn from each other and develop interpersonal skills.
- **Peer Review:** Peer review sessions encourage students to provide and receive constructive feedback on each other's work. This method promotes critical thinking, reflection, and improvement.

## 6. Experiential Learning:

- **Internships and Work Placements:** Internships and work placements provide students with practical experience in their chosen field. These opportunities allow students to apply their knowledge in real-world settings, develop professional skills, and build industry connections.
- **Field Trips and Excursions:** Field trips and excursions offer experiential learning opportunities outside the classroom. These activities provide students with firsthand exposure to relevant sites, industries, and practices.

## 7. Continuous Assessment:

- **Formative Assessments:** Formative assessments, such as quizzes, assignments, and in-class activities, provide ongoing feedback to students and help track their progress. These assessments are designed to support learning and identify areas for improvement.
- **Summative Assessments:** Summative assessments, including final exams, projects, and presentations, evaluate students' overall performance and mastery of course content.

At SRU, our diverse delivery methods ensure that students receive a well-rounded and flexible education that caters to their individual learning preferences. We are committed to continuously enhancing our delivery methods to provide the best possible learning experience for our students.

# COURSE MODULES AND SYNOPSIS

## Year 1 Semester 1

Code	Course	Lectures	Practicals	Credits
BIM100	Introduction to Business Studies	100	0	10
BIM101	Business Numeracy	100	0	10
BIM102	Principles of Microeconomics	100	0	10
BIM103	Principles of Accounting	100	0	10
BIM104	Introduction to Business Management	100	0	10
BIM105	Introduction to Retail Banking	100	0	10

	<b>Total</b>			<b>60</b>
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### Year 1 Semester 2

Code	Course	Lectures	Practicals	Credits
BIM106	Business Mathematics	100	0	10
BIM107	Principles of Microeconomics	100	0	10
BIM108	Applied Financial Accounting	100	0	10
BIM109	Business Law	100	0	10
BIM110	Investments and Financial Markets	100	0	10
BIM111	Corporate Finance	100	0	10
	<b>Total</b>			<b>60</b>

### Year 2 Semester 3

Code	Course	Lectures	Practicals	Credits
BIM212	Intermediate Macroeconomics	100	0	10
BIM213	Bank Management	100	0	10
BIM214	Equities and Fixed Income	100	0	10
BIM215	Linear Algebra	100	0	10
BIM216	Regression Analysis	100	0	10
BIM217	Banking Regulation	100	0	10
	<b>Total</b>			<b>60</b>

### Year 2 Semester 4

Code	Course	Lectures	Practicals	Credits
BIM218	Management and Leadership	100	0	10
BIM219	Financial Statement Analysis and Reporting	100	0	10
BIM220	Economics and Statistics	100	0	10
BIM221	Ethics and Investment Code of Ethics	100	0	10
BIM222	Financial Mathematics	100	0	10
BIM223	Differential Equations	100	0	10
	<b>Total</b>			<b>60</b>

### Year 3 Semester 5

Code	Course	Lectures	Practicals	Credits
BIM324	General Management	100	0	10
BIM325	International Economics	100	0	10
BIM326	Technology and Innovation	100	0	10
BIM327	Risk Management	100	0	10
BIM328	Theory of Interest	100	0	10
BIM329	Financial Management	100	0	10
	<b>Total</b>			<b>60</b>

### Year 3 Semester 6

Code	Course	Lectures	Practicals	Credits
BIM330	Investment Management	100	0	10
BIM331	Business Research Methods	100	0	10
BIM332	Global Banking Operations	100	0	10
BIM333	Internship	0	360	36
	<b>Total</b>			<b>66</b>

### Year 4 Semester 7

Code	Course	Lectures	Practicals	Credits
BIM434	International Bank Management & Strategy	100	0	10
BIM435	Multivariate Data Analysis	100	0	10
BIM436	Strategic Finance	100	0	10
BIM437	Loss Models	100	0	10
BIM438	Stochastic Processes	100	0	10
	<b>Total</b>			<b>50</b>

### Year 4 Semester 8

Code	Course	Lectures	Practicals	Credits
BIM439	Alternative Investment, Derivatives and Portfolio Management	100	0	10
BIM440	Econometrics	100	0	10
BIM441	Statistical Learning	100	0	10
BIM442	Survival Methods	100	0	10
BIM443	Banking Project	100	0	10
	<b>Total</b>			<b>50</b>

## MODULES AND SYNOPSIS

### BIM100 Introduction to Business Studies

The course builds on the understanding of contemporary business and its' environment, management, organization, marketing and financing the organization. The student will be able to explain what a business is and how it operates in a free market system. Discuss inflation and unemployment. Identify and explain basic forms of business ownership. List functions of marketing. Explain the objectives of promotion and the concept of a promotional mix.

### BIM101 Business Numeracy

Students who complete this module will have skills, knowledge and competences related to basic decision numeracy in a business and personal environment. Students will be able to solve everyday mathematical and financial problems by applying basic calculations, costing, probability and the dynamics of break – even.



### **BIM103 Principles of Accounting**

The course introduces students to the accounting equation, accounting cycle and preparation of financial statements, the framework within which financial statements. Generally Accepted Accounting Principles (GAAP), and users of such financial statements. As well, the course will cover inventory and accounts receivables.

### **BIM208 Applied Financial Accounting**

The course provides students with depth knowledge and applied skills about the fundamentals of financial reporting, financial statements and their components, revenue recognition, cash control, recognition and measurement of accounts receivable, accounting for perpetual and periodic inventory systems, inventory costing methods, long – term asset recognition and measurement and their depreciation/amortization.

### **BIM104 Introduction to Business Management**

The course provides an overview of management and business. Human resource, marketing, finance, and strategy concerns are addressed. The course also introduces functions of management: planning, controlling, directing, time management, leadership and operations.

### **BIM105 Introduction to Retail Banking**

The course introduces students to the basic concepts of banking and discusses the existence and benefits of financial intermediation. The course explores activities and services offered by banks and the impact of financial technology (FinTech) on the banking industry. It goes further to examine various type of banks and banking and compare traditional and modern banking.

### **BIM206 Business Mathematics**

The course is an educational module that focuses on the application of mathematical concepts and techniques to solve real – world problems. The course covers various topics including financial mathematics, probability, statistics, linear programming and game theory, among others. Business Mathematics is an interdisciplinary field that combines mathematical concepts with business principles and practices.

### **BIM209 Business Law**

The course is a survey of the legal system designed to develop an understanding of the fundamentals of business law. Classes are conducted by using text and actual case studies for the purpose of observing the development and application of legal principles in a business activity. Topics covered include nature of law, courts and court procedures, crimes and torts, constructs, sales and negotiable instruments.

### **BIM212 Intermediate Macroeconomics**

The course uses tools of macroeconomics to study various macroeconomic policy problems in- depth. The problems range from economic growth in the long – run, to government finances in the intermediate run, and economic stability in the short run. Many economic models used today are surveyed.

### **BIM213 Bank Management**

The course introduces students to the banking industry and financial services management. It covers an overview of banking industry and financial services management, financial

statements and competitors, tools for managing and hedging against risks, management of investment portfolio and liquid positions/reserves and describes the management of sources of funds including deposits, borrowed funds, fee income and capital and looks at loans and lending policies and procedures.

### **BIM214 Equities and Fixed Income**

The course is designed to introduce the student to the modern world of professional asset management. Topics include the identification and analysis of investment opportunities, portfolio analysis and optimization, the identification and execution of investment strategies, and the professional responsibilities of asset managers. The course covers the basics of trading equities and fixed income, and the construction and application of structured products including mortgage, backed securities and synthetic securities.

### **BIM217 Banking Regulation**

The course provides an overview of the legislative provision of banks and financial institutions, fundamental banking laws and regulation. The course highlights major regulation and policies issued by central bank to protect financial systems. The course contains introduction to banking system, structure and formation of bank and financial institutions. Legal provision relating to negotiable instrument, bank and customer relationship, bank lending and securities, legal aspect of trade finance, and legal challenges in the banking business.

### **BIM218 Management and Leadership**

The course teaches students skills and knowledge related to being a leader and manager. The course covers topics such as classical and analytical perspectives on leadership, the difference and similarities between leadership and management, the myths and misconceptions around leadership, the communication and emotional intelligence skills for leadership and the strategic and organizational aspects of leadership.

### **BIM219 Financial Statement Analysis and Reporting**

The course teaches skills and knowledge related to analyzing and interpreting financial statements. The course covers topics such as the purpose of financial statements, the different types of financial statements, the methods of analyzing financial statements and the use of financial ratios. The course aims to help students learn how to evaluate a company's financial performance, identify potential risks, and make informed decisions based on financial data. The course also covers financial reporting, financial statements preparation and financial statements analysis.

### **BIM220 Economics and Statistics**

The course teaches skills and knowledge related to economics and statistics. The course covers topics such as mathematical and statistical methods, econometrics, financial analysis and forecasting. The course aims to help students learn how to analyze economic data, make informed decisions based on financial data, and understand the relationship between economics and statistics.

### **BIM221 Ethics and Investment Code of Ethics**

The course is designed to help professionals develop a culture of integrity that promotes ethical principles of stewardship of investor assets and working in the best interests of clients, above and beyond strict compliance with the law. The course covers topics such as ethical decision making, standards of practice guidance, and the importance of ethical conduct in the investment industry.

### **BIM324 General Management**

The course teaches skills and knowledge related to managing employees, day – to – day operations within a branch, or a department. The course covers topics such as interviewing, hiring, training new employees, setting up regular goals and objectives, and motivating your employees to meet them, creating a positive work culture, handling issues with technology and equipment, participating in organization – wide marketing plans, communicating between corporates and your staff, performing basic book – keeping and human resources duties, including payroll and budgeting.

### **BIM325 International Economics**

The course teaches skills and knowledge related to international trade, monetary relations, and the global economy. The course covers topics such as positive and normative issues of international trade, the implications of openness for the location of production, industries, occupations and innovative activity, and the policy choices and their impact on people, countries and the global economy. The course aims to help students learn how to analyze economic data, make informed decisions based on financial data, and understand the relationship between economics and statistics.

### **BIM326 Technology and Innovation**

The course is designed to teach skills and knowledge related to managing innovation and technology. The course covers topics such as innovation types and processes, how innovation can add or create value, and about the management activities that underpin the innovation and value creation process. The course aims to help students learn how to create and deliver value with a technology strategy.

### **BIM327 Bank Risk Management**

The course is designed to teach skills and knowledge related to bank risk management in the digital age, considering the types of risk that arise from the nature of banking, the trends that are shaping emerging risks, and the implications of these for the future of bank risk management, and to help students view risk holistically across the bank, identify and manage risk within the context of their role, and think ahead and prepare for the future.

### **BIM330 Investment Management**

The course teaches skills and knowledge related to managing investments. The course covers topics such as investment strategies, portfolio management, risk management, financial analysis, and trading strategies, behavioral economics, correlation and dependence, performance management and securities trading among others.

### **BIM331 Business Research Methods**

The course equips students with skills to develop and undertake a research dissertation. The course teaches skills and knowledge related to conducting research in a business context. The course covers topics such as the purpose of research, research design, data collection methods, data analysis, and report writing. The course aims to help students learn how to conduct research that is relevant to business decision making.

### **BIM332 Global Banking Operations**

The course covers global banking business and operations with topics that include global marketing and organizational behavior, international banking law and strategy. The course is designed to provide students with a comprehensive understanding of modern global financial institutions, including how they are organized, the products and financial services they offer, the risk they take, why and how they are regulated, and how this changes overtime. The course aims to equip learners with the necessary knowledge and skills to effectively manage global banking operations, mitigate risks and enhance customer satisfaction.

### **BIM333 Internship**

The course is designed to provide students with the opportunity to gain practical experience in the banking and investment field. The course is also designed to provide students with a structured, supervised, professional work experience within an organization. The internship is guided by learning goals and reflective assignments. It is supervised academically by a faculty member and professionally by an internship supervisor.

### **BIM434 International Bank Management and Strategy**

The course aims to prepare students to manage international banks and investment firms in an ever – changing global business environment. Changes in the business environment tend to surface on a variety of fronts – political, economic, technological, cultural and industry specific. The course further covers topics such as strategic planning, risk management and leadership development. The course examines the contextual, organizational, and managerial issues associated with the operation of multinational firms.

### **BIM439 Alternative Investment, Derivatives and Portfolio Management**

The course is designed to provide students with comprehensive understanding of alternative investments, derivatives and portfolio management. The course is intended to provide firsthand experience on how products like Options, Futures, Swaps, ETFs, Structural Notes, and Convertible Bonds are structured, valued and used by all types of investors globally. The course aims to equip students with skills and knowledge to evaluate alternative investments including private equity, private debt, hedge funds and real estates, and identify their defining elements, such as size, risk and liquidity.

### **BIM443 Banking Project**

The project is documented by a final research report or dissertation. The students work is guided by an academic supervisor and is supported by a variety of key skills programs. Students are expected to construct a research project that includes original research, deliberate and well considered methodological choices and shows relevance to significant conversations within the discipline.

# COURSE OUTLINES

## Module Title: BIM100 - Introduction to Business Studies

### Course Description:

The BIM100 module provides an accessible and comprehensive introduction to contemporary business and its various aspects. Students will explore fundamental concepts related to business operations, management, marketing, and financing. The course emphasizes understanding how businesses function within a free market system and addresses critical topics such as inflation, unemployment, and different forms of business ownership. Additionally, students will delve into marketing functions, promotional objectives, and the concept of a promotional mix.

### Learning Objectives:

1. **Understanding Contemporary Business:**
  - Define what constitutes a business and its role in society.
  - Explore the dynamic nature of business environments.
2. **Business Operations and Management:**
  - Study organizational structures, functions, and management principles.
  - Understand how businesses operate efficiently and effectively.
3. **Marketing Fundamentals:**
  - Explore the essential functions of marketing.
  - Analyze market research, segmentation, and consumer behavior.
4. **Financial Aspects of Business:**
  - Discuss financing options and financial management.
  - Address inflation, unemployment, and economic challenges.
5. **Promotion and Marketing Communication:**
  - Understand the objectives of promotion.
  - Explore the concept of a promotional mix.

### Course Topics:

1. Introduction to Business and Its Environment
2. Business Organization and Management
3. Marketing Principles and Strategies
4. Financial Management and Economic Context
5. Promotional Objectives and Communication Strategies

### Assessment:

- Reflective essays on business concepts
- Case studies analyzing real-world business scenarios
- Marketing project on designing a promotional campaign

### Prerequisites:

Basic understanding of business concepts and economic principles.

### Recommended Readings:

- “Introduction to Business” by O.C. Ferrell and Geoffrey Hirt
- Relevant research articles on contemporary business practices

### **Grading:**

Grading will be based on active participation, project outcomes, and critical analysis.

## **Module Title: BIM101 - Business Numeracy**

### **Course Description:**

The BIM101 module equips students with essential skills, knowledge, and competences related to basic decision numeracy in both business and personal environments. Participants will learn how to solve everyday mathematical and financial problems by applying fundamental calculations, understanding costing principles, assessing probabilities, and analyzing break-even dynamics.

### **Learning Objectives:**

- 1. Numerical Literacy and Problem-Solving:**
  - Develop proficiency in basic mathematical operations.
  - Apply numerical skills to practical scenarios encountered in business and personal contexts.
- 2. Costing and Financial Analysis:**
  - Understand cost structures and pricing strategies.
  - Calculate costs, margins, and profits.
- 3. Probability and Risk Assessment:**
  - Explore probability concepts and their relevance to decision-making.
  - Evaluate risks associated with various outcomes.
- 4. Break-Even Analysis:**
  - Analyze break-even points for products or services.
  - Understand how costs and revenues intersect.

### **Course Topics:**

1. Introduction to Business Numeracy
2. Basic Mathematical Operations
3. Costing Principles and Pricing Strategies
4. Probability and Decision-Making
5. Break-Even Dynamics

### **Assessment:**

- Practical problem-solving exercises
- Case studies applying numerical concepts
- Financial analysis project

### **Prerequisites:**

Basic understanding of mathematics and business concepts.

**Recommended Readings:**

- “Business Mathematics” by Clendenen and Salzman
- Relevant research articles on business numeracy

**Grading:**

Grading will be based on active participation, project outcomes, and critical analysis.

**Module Title: BIM102 - Macroeconomics****Course Description:**

The BIM102 module focuses on understanding how an economy functions at the national level. Students will explore various government policies and their impact on the economy and citizens' lives. The course provides essential concepts and factual knowledge to interpret economic news related to three main macroeconomic concerns: inflation, unemployment, and economic growth.

**Learning Objectives:**

1. **Macroeconomic Fundamentals:**
  - Understand the key components of an economy.
  - Explore macroeconomic indicators and their significance.
2. **Government Policies and Economic Impact:**
  - Study various government policies (e.g., monetary, fiscal) and their effects.
  - Analyze how policy decisions influence inflation, unemployment, and economic growth.
3. **Interpreting Economic News:**
  - Develop skills to read and understand economic news.
  - Apply macroeconomic concepts to real-world events.

**Course Topics:**

1. Introduction to Macroeconomics
2. National Income and Output
3. Inflation and Price Stability
4. Unemployment and Labor Markets
5. Economic Growth and Development

**Assessment:**

- Case studies analyzing policy decisions
- Economic news analysis assignments
- Final exam covering macroeconomic concepts

**Prerequisites:**

Basic understanding of economics principles.

**Recommended Readings:**

- “Macroeconomics” by N. Gregory Mankiw
- Relevant research articles on macroeconomic issues

### **Grading:**

Grading will be based on active participation, assignments, and critical analysis.

## **Module Title: BIM103 - Principles of Accounting**

### **Course Description:**

The BIM103 module introduces students to fundamental accounting concepts, principles, and procedures. Participants will explore the accounting equation, the accounting cycle, and the preparation of financial statements. The course emphasizes the framework within which financial statements are prepared, including Generally Accepted Accounting Principles (GAAP). Additionally, the module covers topics related to inventory management and accounts receivables.

### **Learning Objectives:**

- 1. Accounting Basics:**
  - Understand the purpose and scope of accounting.
  - Explore the accounting equation and its components.
- 2. Financial Statements Preparation:**
  - Study the steps involved in the accounting cycle.
  - Learn how to prepare income statements, balance sheets, and cash flow statements.
- 3. GAAP and Financial Reporting:**
  - Understand the importance of adhering to GAAP.
  - Explore the role of financial statements in decision-making.
- 4. Inventory Management:**
  - Analyze inventory valuation methods (e.g., FIFO, LIFO).
  - Understand the impact of inventory on financial statements.
- 5. Accounts Receivables:**
  - Study accounts receivable management and collection processes.
  - Explore credit policies and bad debt provisions.

### **Course Topics:**

1. Introduction to Accounting Principles
2. The Accounting Equation and Cycle
3. Financial Statements: Income Statements, Balance Sheets, and Cash Flow Statements
4. GAAP and Financial Reporting
5. Inventory Valuation and Accounts Receivables

### **Assessment:**

- Practical exercises in financial statement preparation
- Case studies analyzing real-world accounting scenarios
- Inventory management project



**Prerequisites:**

Basic understanding of business concepts and mathematics.

**Recommended Readings:**

- “Financial Accounting: Tools for Business Decision-Making” by Paul D. Kimmel, Jerry J. Weygandt, and Donald E. Kieso
- Relevant research articles on accounting principles

**Grading:**

Grading will be based on active participation, project outcomes, and critical analysis.

**BIM104: Introduction to Business Management****Course Description:**

BIM104 introduces students to fundamental concepts in business management. Specifically tailored for banking and investment management, the course explores essential areas such as human resources, marketing, finance, and strategic considerations. Students gain insights into the dynamic landscape of financial institutions and learn how effective management practices impact organizational success.

**Learning Outcomes:**

By the end of the course, students should be able to:

- Understand the role of management in banking and investment contexts.
- Apply management principles to real-world scenarios.
- Analyze business challenges and propose solutions.
- Demonstrate effective communication and leadership skills.

**Course Topics:** Here are some of the core topics covered in BIM104:

- **Human Resource Management (HRM):**
  - Recruitment, training, and performance evaluation.
  - Employee relations and workforce development.
- **Marketing Strategies:**
  - Market segmentation, product positioning, and promotional techniques.
  - Understanding customer behavior and market research.
- **Financial Management:**
  - Financial statements analysis.
  - Budgeting, investment decisions, and risk assessment.
- **Strategic Planning:**
  - Developing business strategies.
  - Competitive analysis and industry trends.
- **Operational Efficiency:**
  - Time management and process optimization.
  - Leadership skills and effective team management.

## **BIM105: Introduction to Retail Banking.**

### **Course Description:**

BIM105 introduces students to the fundamental concepts of retail banking. It explores the role of banks as financial intermediaries and their impact on the economy. Students learn about the services offered by retail banks, including deposit accounts, loans, and payment systems. The course also examines the influence of financial technology (FinTech) on the banking industry.

### **Learning Outcomes:**

By the end of the course, students should be able to:

- Understand the purpose and functions of retail banks.
- Analyze the benefits of financial intermediation.
- Evaluate the impact of FinTech innovations on banking services.
- Compare traditional banking practices with modern approaches.

**Course Topics:** Here are some of the core topics covered in BIM105:

- **Introduction to Retail Banking:**
  - Definition of retail banking and its significance.
  - Historical context and evolution of retail banking.
- **Financial Intermediation:**
  - Role of banks in channeling funds from savers to borrowers.
  - Importance of liquidity and risk management.
- **Banking Services:**
  - Deposit accounts (savings, checking, certificates of deposit).
  - Consumer loans (personal loans, mortgages, credit cards).
  - Payment systems (ATMs, online banking, mobile payments).
- **FinTech and Banking:**
  - Impact of digitalization on customer experience.
  - Online banking platforms, robo-advisors, and peer-to-peer lending.
- **Types of Banks:**
  - Commercial banks, community banks, credit unions.
  - Non-bank financial institutions (NBFI) and challenger banks.
- **Comparing Traditional and Modern Banking:**
  - Branch-based vs. digital banking.
  - Regulatory challenges and consumer protection.

## **Module Title: BIM106 - Business Mathematics**

### **Course Description:**

BIM106 emphasizes the intersection of mathematics and business. Students learn how to use mathematical tools to analyze business scenarios and make informed decisions. The course covers financial mathematics, probability, statistics, linear programming, and game theory.

## **Learning Objectives:**

By the end of the course, students should be able to:

- Apply mathematical concepts to solve business-related problems.
- Understand financial calculations and risk assessment.
- Analyze data using statistical methods.
- Optimize business processes through linear programming.
- Explore strategic decision-making using game theory.

## **Course Topics:**

- **Financial Mathematics:**
  - Time value of money (present value, future value).
  - Interest rates, annuities, and loan amortization.
- **Probability and Statistics:**
  - Probability distributions (normal, binomial, Poisson).
  - Descriptive statistics (mean, variance, standard deviation).
- **Linear Programming:**
  - Formulating linear models for resource allocation.
  - Solving optimization problems (maximization, minimization).
- **Game Theory:**
  - Strategic interactions and decision-making.
  - Nash equilibrium and applications in business.

## **Assessment:**

- Problem-solving exercises using mathematical techniques.
- Case studies applying concepts to business scenarios.
- Quizzes on probability and statistical analysis.

## **Prerequisites:**

- Basic understanding of algebra and calculus.

## **Recommended Readings:**

- “Business Mathematics” by Clendenen and Salzman.
- Relevant research articles on mathematical applications in business.

## **Grading:**

- Grading based on problem-solving skills, application, and understanding.

## **Module Title: BIM107 - Microeconomics**

The course “Business Mathematics” provides students with a solid foundation in mathematical techniques applicable to real-world business scenarios. Through an interdisciplinary lens, students explore the intersection of mathematics and business principles. Key topics include financial mathematics, probability, statistics, linear programming, and game theory. By

mastering these concepts, students gain valuable tools for informed decision-making in business contexts.

### **Learning Objectives:**

By the end of the course, students should be able to:

- Understand microeconomic principles and their applications.
- Evaluate market outcomes in terms of resource efficiency.
- Analyze the impact of market systems on the environment and social equity.
- Propose economic solutions for addressing market failures.

### **Course Topics:**

- **Introduction to Microeconomics:**
  - Scarcity, opportunity cost, and basic economic concepts.
  - Microeconomic vs. macroeconomic perspectives.
- **Resource Allocation and Market Efficiency:**
  - Supply and demand analysis.
  - Consumer and producer surplus.
- **Market Failures and Externalities:**
  - Pollution, risk, and discrimination as market failures.
  - Role of government intervention.
- **Price Determination and Production Choices:**
  - Marginal analysis and production decisions.
  - Factors of production (land, labor, capital).
- **Distribution of Income and Wealth:**
  - Income inequality and poverty.
  - Redistribution policies.

### **Assessment:**

- Problem-solving exercises based on microeconomic scenarios.
- Case studies analyzing market outcomes.
- Class discussions on economic solutions.

### **Prerequisites:**

- No specific prerequisites; open to all students.

### **Recommended Readings:**

- “Microeconomics: Principles and Applications” by Robert E. Hall and Marc Lieberman.
- Relevant research articles on microeconomic topics.

### **Grading:**

- Grading based on participation, assignments, and understanding of microeconomic concepts.

## **Module Title: BIM108 - Applied Financial Accounting**

### **Course Description:**

BIM108 focuses on the practical application of financial accounting principles. Students delve into the fundamentals of financial reporting, understanding the components of financial statements. The course covers revenue recognition, cash control, and measurement of accounts receivable.

### **Learning Objectives:**

By the end of the course, students should be able to:

- Prepare financial statements accurately.
- Apply revenue recognition principles.
- Manage cash effectively within accounting systems.
- Understand perpetual and periodic inventory systems.
- Evaluate inventory costing methods (e.g., FIFO, LIFO, weighted average).
- Recognize and measure long-term assets (property, plant, equipment).
- Calculate depreciation and amortization.

### **Course Topics:**

- **Introduction to Financial Accounting:**
  - Role of financial accounting in business.
  - Accounting standards and regulatory frameworks.
- **Financial Reporting and Statements:**
  - Income statement, balance sheet, and cash flow statement.
  - Components of each financial statement.
- **Revenue Recognition and Cash Control:**
  - Principles for recognizing revenue.
  - Internal controls over cash transactions.
- **Inventory Accounting:**
  - Perpetual vs. periodic inventory systems.
  - Inventory valuation methods.
- **Long-Term Assets:**
  - Recognition, measurement, and impairment of assets.
  - Depreciation (straight-line, declining balance) and amortization.

### **Assessment:**

- Practical exercises in financial statement preparation.
- Case studies analyzing revenue recognition scenarios.
- Inventory cost calculations and asset valuation exercises.

### **Prerequisites:**

- Basic understanding of accounting principles.

### **Recommended Readings:**

- "Financial Accounting" by Libby, Libby, and Short.
- Relevant research articles on accounting practices.

**Grading:**

- Grading based on accuracy, application, and understanding.

**Module Title: BIM109 Business Law****Course Description:**

Business Law is a survey course that explores the legal system's impact on business operations. Through case studies and theoretical discussions, students observe the application of legal principles in real-world business scenarios. Topics covered include the nature of law, court procedures, crimes, torts, contracts, and negotiable instruments.

**Learning Objectives:**

By the end of the course, students should be able to:

- Understand the fundamentals of business law.
- Analyze legal issues relevant to business activities.
- Apply legal principles to practical situations.
- Recognize the role of courts and court procedures.
- Differentiate between crimes and torts.
- Comprehend the legal aspects of contracts and sales transactions.

**Course Topics:**

- **Introduction to Business Law:**
  - Overview of legal principles and their relevance to business.
  - Sources of law (statutory, common law, administrative).
- **Court Systems and Procedures:**
  - Structure of courts (federal, state, appellate).
  - Legal proceedings (pleadings, discovery, trial).
- **Crimes and Torts:**
  - Criminal offenses (fraud, theft, white-collar crimes).
  - Civil wrongs (negligence, defamation, product liability).
- **Contracts and Negotiable Instruments:**
  - Elements of a valid contract.
  - Types of contracts (express, implied, unilateral).
  - Negotiable instruments (promissory notes, checks).

**Assessment:**

- Case study analysis.
- Legal research assignments.
- Quizzes on legal concepts.

**Prerequisites:**

- No specific prerequisites; open to all students.

**Recommended Readings:**

- “Business Law: Text and Cases” by Kenneth W. Clarkson et al.
- Relevant legal articles and court decisions.

#### **Grading:**

- Grading based on participation, understanding, and application of legal principles.

### **Module Title: BIM110 - Investments and Financial Markets**

#### **Course Description:**

BIM110 provides an in-depth understanding of investment principles and financial markets. Participants explore the role of financial institutions and learn about investment parameters. The course emphasizes practical application and aims to enhance participants’ competence.

#### **Learning Objectives:**

By the end of the course, participants should be able to:

- Understand investment theory and practice.
- Analyze financial institutions’ functions and impact.
- Evaluate investment parameters (risk, return, liquidity).
- Apply investment strategies effectively.

#### **Course Topics:**

- **Introduction to Investments:**
  - Overview of financial markets and investment vehicles.
  - Risk and return trade-offs.
- **Financial Institutions:**
  - Role of banks, brokerage firms, and investment companies.
  - Regulatory frameworks.
- **Investment Parameters:**
  - Risk assessment (volatility, diversification).
  - Return measurement (yield, capital gains).
  - Liquidity considerations.
- **Investment Strategies:**
  - Asset allocation models.
  - Portfolio construction and management.
  - Behavioral finance insights.

#### **Assessment:**

- Case studies analyzing investment decisions.

- Portfolio simulations.
- Written reports on investment strategies.

**Prerequisites:**

- Basic understanding of finance and economics.

**Recommended Readings:**

- “Investments” by Bodie, Kane, and Marcus.
- Relevant research articles on financial markets.

**Grading:**

- Grading based on participation, assignments, and understanding.

**Module Title: BIM111 - Corporate Finance**

**Course Description:**

BIM111 explores the essential concepts and techniques in corporate finance. Emphasis is placed on financial decisions made by corporate managers within the firm and in their interactions with investors. Valuation processes are central to these decisions and will be a recurring theme throughout the course.

**Learning Objectives:**

By the end of the course, participants should be able to:

- Evaluate investment criteria and make informed decisions.
- Understand the valuation of financial assets and liabilities.
- Analyze the relationship between risk and return.
- Make capital structure choices.
- Implement effective payout policies.
- Value derivative securities (futures, options, convertible securities).
- Manage financial risk.

**Course Topics:**

- **Introduction to Corporate Finance:**
  - Role of finance in corporate decision-making.
  - Financial goals and agency theory.
- **Investment Decision Criteria:**
  - Net present value (NPV) and internal rate of return (IRR).
  - Capital budgeting techniques.
- **Valuation of Financial Assets and Liabilities:**
  - Discounted cash flow (DCF) valuation.
  - Bond and stock valuation.
- **Risk and Return:**
  - Portfolio theory and diversification.
  - Capital asset pricing model (CAPM).
- **Capital Structure and Payout Policy:**
  - Debt-equity mix and cost of capital.



- Dividend policy and share repurchases.
- **Derivative Securities and Risk Management:**
  - Futures contracts, options, and convertible securities.
  - Hedging strategies.

**Assessment:**

- Case studies analyzing corporate financial decisions.
- Valuation exercises.
- Risk management simulations.

**Prerequisites:**

- Basic understanding of finance and accounting.

**Recommended Readings:**

- “Principles of Corporate Finance” by Brealey, Myers, and Allen.
- Relevant research articles on corporate finance practices.

**Grading:**

- Grading based on participation, assignments, and understanding.

**Module Title: BIM212 - Intermediate Macroeconomics**

**Course Description:**

BIM212 employs macroeconomic tools to delve into various policy problems. Topics span from long-run economic growth to intermediate-term government finances and short-run economic stability. The course surveys contemporary economic models.

**Learning Objectives:**

By the end of the course, participants should be able to:

- Analyze macroeconomic policy challenges.
- Understand the dynamics of economic growth.
- Evaluate government fiscal policies.
- Explore short-term economic fluctuations.
- Familiarize themselves with prevalent economic models.

**Course Topics:**

- **Long-Run Economic Growth:**
  - Factors influencing sustained economic expansion.
  - Technological progress and productivity.
- **Intermediate-Term Government Finances:**
  - Fiscal policy, budget deficits, and public debt.

- Government revenue and expenditure.
- **Short-Run Economic Stability:**
  - Business cycles, recessions, and expansions.
  - Monetary policy and central banking.
- **Survey of Economic Models:**
  - Keynesian, neoclassical, and New Keynesian models.
  - Dynamic stochastic general equilibrium (DSGE) models.

**Assessment:**

- Problem sets analyzing policy scenarios.
- Case studies on economic stability.
- Exams covering theoretical concepts.

**Prerequisites:**

- Basic understanding of macroeconomic principles.

**Recommended Readings:**

- “Macroeconomics” by N. Gregory Mankiw.
- Research articles on contemporary macroeconomic issues.

**Grading:**

- Grading based on participation, assignments, and comprehension.

**Module Title: BIM213 - Bank Management**

**Course Description:**

BIM213 introduces students to the banking industry and financial services management. Key topics include an overview of the banking industry, financial statements, risk management, investment portfolio management, and sources of funds. The course emphasizes practical skills relevant to bank operations.

**Learning Objectives:**

By the end of the course, students should be able to:

- Understand the structure and functions of the banking industry.
- Analyze financial statements and evaluate bank performance.
- Apply risk management tools and hedging strategies.
- Manage investment portfolios and maintain liquidity.
- Explore sources of funds (deposits, borrowed funds, capital).
- Comprehend lending policies and procedures.

**Course Topics:**

- **Overview of Banking Industry and Financial Services:**
  - Role of banks in the economy.

- Types of financial services offered.
- **Financial Statements and Competitors:**
  - Analyzing bank balance sheets and income statements.
  - Benchmarking against industry competitors.
- **Risk Management Tools and Hedging:**
  - Managing credit risk, interest rate risk, and liquidity risk.
  - Derivatives for risk mitigation.
- **Investment Portfolio Management:**
  - Asset allocation and investment strategies.
  - Balancing risk and return.
- **Sources of Funds and Capital Management:**
  - Deposits, interbank borrowing, and capital adequacy.
  - Fee income and non-interest revenue.
- **Loans and Lending Policies:**
  - Loan origination, underwriting, and credit evaluation.
  - Loan portfolio diversification.

**Assessment:**

- Case studies analyzing real-world banking scenarios.
- Risk management exercises.
- Group projects on investment portfolio management.

**Prerequisites:**

- Basic understanding of finance and banking concepts.

**Recommended Readings:**

- “Bank Management and Financial Services” by Peter S. Rose and Sylvia C. Hudgins.
- Relevant research articles on banking practices.

**Grading:**

- Grading based on participation, assignments, and comprehension.

**Module Title: BIM214 - Equities and Fixed Income**

**Course Description:**

BIM214 introduces students to the modern world of professional asset management. Key topics include identifying and analyzing investment opportunities, portfolio optimization, executing investment strategies, and understanding asset managers' responsibilities. The course covers the basics of trading equities and fixed income securities, as well as structured products such as mortgage-backed securities and synthetic securities.

**Learning Objectives:**

By the end of the course, students should be able to:

- Analyze investment opportunities in equities and fixed income markets.
- Optimize investment portfolios based on risk-return trade-offs.
- Execute effective investment strategies.
- Understand the professional ethics and responsibilities of asset managers.

#### **Course Topics:**

- **Introduction to Asset Management:**
  - Role of asset managers in financial markets.
  - Investment decision-making process.
- **Equity Investments:**
  - Stock valuation methods (DCF, multiples).
  - Equity market analysis and trends.
- **Fixed Income Investments:**
  - Bond valuation and yield calculations.
  - Interest rate risk and duration.
- **Portfolio Optimization:**
  - Efficient frontier and risk diversification.
  - Capital market line (CML) and security market line (SML).
- **Structured Products:**
  - Mortgage-backed securities (MBS).
  - Collateralized debt obligations (CDOs).
  - Synthetic securities (credit default swaps, total return swaps).

#### **Assessment:**

- Case studies analyzing real-world investment scenarios.
- Portfolio optimization exercises.
- Ethical dilemmas in asset management.

#### **Prerequisites:**

- Basic understanding of finance and investment concepts.

#### **Recommended Readings:**

- “Investments” by Zvi Bodie, Alex Kane, and Alan J. Marcus.
- Research articles on asset management practices.

#### **Grading:**

- Grading based on participation, assignments, and comprehension.

### **Module Title: BIM215 - Linear Algebra**

#### **Course Description:**

BIM215 introduces fundamental concepts in linear algebra. Topics covered include solving systems of linear equations, matrix operations, linear transformations, determinants, eigenvalues, and eigenvectors. Applications in various fields, including differential equations and function spaces, are explored.

## **Learning Objectives:**

By the end of the course, students should be able to:

- Solve systems of linear equations using matrix methods.
- Understand the properties of matrices and linear transformations.
- Compute determinants and eigenvalues.
- Apply linear algebra techniques to real-world problems.

## **Course Topics:**

- **Systems of Linear Equations:**
  - Gaussian elimination and row reduction.
  - Homogeneous and nonhomogeneous systems.
- **Matrices and Linear Transformations:**
  - Matrix operations (addition, multiplication).
  - Image and kernel of linear transformations.
- **Coordinates and Bases:**
  - Change of basis and coordinate transformations.
  - Orthogonal bases and Gram-Schmidt process.
- **Determinants and Eigenvalues:**
  - Properties of determinants.
  - Eigenvalue-eigenvector pairs.
- **Applications:**
  - Discrete and continuous dynamical systems.
  - Least-squares approximation.
  - Differential equations and function spaces.

## **Assessment:**

- Problem-solving exercises related to linear algebra concepts.
- Applications of linear algebra in various contexts.
- Quizzes and exams covering theoretical knowledge.

## **Prerequisites:**

- Basic understanding of algebra and calculus.

## **Recommended Readings:**

- “Introduction to Linear Algebra” by Gilbert Strang.
- Additional readings from relevant textbooks.

## **Grading:**

- Grading based on participation, assignments, and comprehension.

## **Module Title: BIM216 - Regression Analysis**

## **Course Description:**

BIM216 introduces students to multivariate statistics, emphasizing methods for studying change and contextual effects. Topics covered include general linear hypothesis testing, logistic regression, multilevel models, cluster analysis, principal component analysis, exploratory data analysis, and structural equation modeling. The course emphasizes practical application using computer software for analyzing real-world data.

### **Learning Objectives:**

By the end of the course, students should be able to:

- Apply regression techniques to analyze multivariate data.
- Understand hypothesis testing in the context of linear models.
- Interpret results from logistic regression.
- Explore multilevel modeling for nested data.
- Perform cluster analysis and dimensionality reduction.
- Apply structural equation modeling to complex relationships.

### **Course Topics:**

- **General Linear Hypothesis Testing:**
  - Parametric vs. nonparametric tests.
  - ANOVA and regression models.
- **Logistic Regression:**
  - Modeling binary outcomes.
  - Odds ratios and interpretation.
- **Multilevel Models:**
  - Hierarchical data structures.
  - Random effects and fixed effects.
- **Cluster Analysis and Principal Component Analysis:**
  - Grouping similar observations.
  - Dimensionality reduction.
- **Structural Equation Modeling (SEM):**
  - Confirmatory vs. exploratory models.
  - Path analysis and latent variables.

### **Assessment:**

- Data analysis projects using regression techniques.
- Interpretation of results and report writing.
- Quizzes and exams covering theoretical concepts.

### **Prerequisites:**

- Strong background in multiple regression analysis.

### **Recommended Readings:**

- “Applied Multivariate Statistical Analysis” by Richard A. Johnson and Dean W. Wichern.
- Research articles on regression and multivariate methods.

### **Grading:**

- Grading based on participation, assignments, and comprehension.

## **Module Title: BIM217 - Banking Regulation**

### **Course Description:**

BIM217 provides an overview of legislative provisions related to banks and financial institutions. The course emphasizes fundamental banking laws and regulations. Major policies issued by central banks to safeguard financial systems are explored.

### **Learning Objectives:**

By the end of the course, students should be able to:

- Understand the legal framework governing banks and financial institutions.
- Analyze the structure and formation of banks.
- Comprehend legal provisions related to negotiable instruments.
- Explore bank-customer relationships and lending practices.
- Address legal challenges specific to the banking industry.

### **Course Topics:**

- **Introduction to Banking System:**
  - Role of banks in the economy.
  - Types of financial institutions.
- **Bank Structure and Formation:**
  - Organizational models (commercial banks, credit unions, etc.).
  - Licensing and regulatory requirements.
- **Legal Aspects of Banking Transactions:**
  - Negotiable instruments (checks, promissory notes).
  - Bank-customer contracts and obligations.
- **Bank Lending and Securities:**
  - Loan agreements and collateral.
  - Legal considerations in lending practices.
- **Trade Finance and Legal Challenges:**
  - Letters of credit, bills of exchange.
  - Regulatory compliance and risk management.

### **Assessment:**

- Case studies analyzing real-world legal scenarios in banking.
- Legal research assignments.
- Quizzes on banking regulations.

### **Prerequisites:**

- Basic understanding of financial institutions and legal concepts.

### **Recommended Readings:**

- “Banking Law and Regulation” by Richard Scott Carnell et al.

- Relevant legal articles on banking practices.

#### **Grading:**

- Grading based on participation, assignments, and comprehension.

### **Module Title: BIM218 - Leadership and Management**

#### **Course Description:**

BIM218 equips students with essential skills and knowledge related to leadership and management. The course covers classical and analytical perspectives on leadership, emphasizing practical applications. Students explore the differences and similarities between leadership and management, dispelling myths and misconceptions.

#### **Learning Objectives:**

By the end of the course, students should be able to:

- Understand the fundamentals of effective leadership.
- Analyze classical and contemporary leadership theories.
- Develop communication and emotional intelligence skills.
- Apply strategic thinking and organizational principles.

#### **Course Topics:**

- **Classical and Analytical Perspectives on Leadership:**
  - Historical theories (trait theory, behavioral theory).
  - Contemporary approaches (transformational leadership, situational leadership).
- **Leadership vs. Management:**
  - Clarifying roles and responsibilities.
  - Balancing task-oriented and people-oriented skills.
- **Myths and Misconceptions about Leadership:**
  - Debunking common misconceptions.
  - Recognizing authentic leadership qualities.
- **Communication and Emotional Intelligence Skills:**
  - Effective communication strategies.
  - Empathy, self-awareness, and social skills.
- **Strategic and Organizational Aspects of Leadership:**
  - Vision-setting and goal alignment.
  - Leading change and fostering innovation.

#### **Assessment:**

- Case studies analyzing leadership scenarios.
- Group projects on strategic planning.
- Reflective essays on personal leadership development.

#### **Prerequisites:**



- Open to all students interested in leadership and management.

#### **Recommended Readings:**

- “Leaders Eat Last” by Simon Sinek.
- Research articles on leadership effectiveness.

#### **Grading:**

- Grading based on participation, assignments, and comprehension.

### **Module Title: BIM219 - Financial Statements Analysis and Reporting**

#### **Course Description:**

BIM219 equips students with skills and knowledge related to analyzing and interpreting financial statements. The course covers the purpose of financial statements, different types of financial statements, methods for analyzing them, and the use of financial ratios. Students learn how to evaluate a company's financial performance, identify risks, and make informed decisions based on financial data.

#### **Learning Objectives:**

By the end of the course, students should be able to:

- Interpret financial statements in context.
- Apply appropriate models and techniques for company valuation.
- Understand how accounting provides data for corporate finance analysis.

#### **Course Topics:**

- **Purpose of Financial Statements:**
  - Role of financial statements in business.
  - Users of financial statements (investors, creditors, management).
- **Types of Financial Statements:**
  - Income statement, balance sheet, and cash flow statement.
  - Understanding each statement's components.
- **Methods of Analyzing Financial Statements:**
  - Ratio analysis (liquidity, solvency, profitability).
  - Trend analysis and common-size statements.
- **Financial Ratios:**
  - Liquidity ratios (current ratio, quick ratio).
  - Profitability ratios (ROE, ROA).
  - Debt ratios (debt-to-equity, interest coverage).
- **Financial Reporting and Preparation:**
  - Accounting standards (GAAP, IFRS).
  - Financial statement preparation process.

#### **Assessment:**

- Case studies analyzing real-world financial statements.

- Ratio calculations and interpretation.
- Written reports on financial performance.

**Prerequisites:**

- Basic understanding of accounting principles.

**Recommended Readings:**

- “Financial Statement Analysis and Security Valuation” by Stephen H. Penman.
- Research articles on financial reporting practices.

**Grading:**

- Grading based on participation, assignments, and comprehension.

**Module Title: BIM220 - Economics and Statistics**

**Course Description:**

BIM220 equips students with skills and knowledge related to economics and statistics. The course covers mathematical and statistical methods, econometrics, financial analysis, and forecasting. Students learn how to analyze economic data, make informed decisions based on financial data, and understand the interplay between economics and statistics.

**Learning Objectives:**

By the end of the course, students should be able to:

- Apply statistical techniques to economic data.
- Understand econometric modeling and forecasting.
- Analyze financial data using statistical tools.
- Interpret relationships between economic variables.

**Course Topics:**

- **Mathematical and Statistical Methods:**
  - Probability theory and distributions.
  - Hypothesis testing and confidence intervals.
- **Econometrics and Forecasting:**
  - Regression analysis and model estimation.
  - Time series analysis and forecasting.
- **Financial Analysis:**
  - Financial ratios and performance metrics.
  - Risk assessment and portfolio optimization.
- **Relationship between Economics and Statistics:**
  - Data-driven economic research.
  - Policy evaluation using statistical evidence.

**Assessment:**

- Data analysis projects using economic and statistical data.
- Forecasting exercises.
- Written reports on economic trends.

**Prerequisites:**

- Basic understanding of economics and statistical concepts.

**Recommended Readings:**

- “Statistics for Business and Economics” by Paul Newbold et al.
- Research articles on applied economics and statistical methods.

**Grading:**

- Grading based on participation, assignments, and comprehension.

**Module Title: BIM221 - Ethics and Investment Code of Ethics****Course Description:**

BIM221 focuses on developing a culture of integrity within the investment industry. Professionals learn to promote ethical principles, safeguard investor assets, and prioritize clients' best interests. The course covers ethical decision-making, standards of practice guidance, and the significance of ethical conduct.

**Learning Objectives:**

By the end of the course, participants should be able to:

- Understand the importance of ethics in investment practices.
- Apply ethical decision-making frameworks.
- Comply with standards of professional conduct.
- Recognize conflicts of interest and fiduciary responsibilities.

**Course Topics:**

- **Introduction to Ethics in Investment:**
  - Role of ethics in financial services.
  - Ethical challenges faced by investment professionals.
- **Standards of Practice Guidance:**
  - CFA Institute Code of Ethics and Standards of Professional Conduct.
  - Regulatory requirements and legal obligations.
- **Ethical Decision Making:**
  - Psychological factors influencing decisions.
  - Case studies on ethical dilemmas.
- **Importance of Ethical Conduct:**
  - Building trust with clients and stakeholders.
  - Impact on investor confidence and market integrity.

**Assessment:**

- Case study analysis of real-world ethical scenarios.
- Application of ethical frameworks to investment decisions.
- Group discussions on ethical challenges.

**Prerequisites:**

- Basic understanding of investment practices and financial services.

**Recommended Readings:**

- CFA Institute Code of Ethics and Standards of Professional Conduct.
- Relevant research articles on investment ethics.

**Grading:**

- Grading based on participation, assignments, and comprehension.

**Module Title: BIM222 - Financial Mathematics****Course Description:**

BIM222 introduces fundamental mathematical concepts and techniques used in finance. Students learn to apply mathematical formulas to solve financial problems related to interest rates, annuities, amortization, stock pricing, and capital budgeting.

**Learning Objectives:**

By the end of the course, students should be able to:

- Understand the mathematical foundations of financial calculations.
- Apply mathematical techniques to real-world financial scenarios.
- Analyze investment decisions using mathematical models.

**Course Topics:**

- **Interest Rates and Annuities:**
  - Simple and compound interest.
  - Present value and future value of annuities.
- **Amortization and Loan Repayment:**
  - Loan payment schedules.
  - Mortgage amortization.
- **Stock Pricing and Valuation:**
  - Dividend discount models.
  - Stock valuation techniques.
- **Capital Budgeting:**
  - Net present value (NPV) analysis.
  - Internal rate of return (IRR).

**Assessment:**

- Problem-solving exercises related to financial mathematics.
- Application of mathematical formulas to investment scenarios.
- Quizzes and exams covering theoretical concepts.

**Prerequisites:**

- Basic understanding of mathematics.

**Recommended Readings:**

- “Financial Mathematics” by Robert J. Elliott and P. Ekkehard Kopp.

**Grading:**

- Grading based on participation, assignments, and comprehension.

**Module Title: BIM223 - Differential Equations****Course Description:**

BIM223 explores the fundamental concepts of differential equations. Differential equations serve as the language for expressing natural laws in science and engineering. The course focuses on ordinary differential equations (ODEs) dealing with functions of one variable, often representing time-dependent phenomena.

**Learning Objectives:**

By the end of the course, students should be able to:

- Understand the role of differential equations in modeling dynamic systems.
- Analyze properties of solutions to ODEs.
- Apply mathematical techniques to solve ODEs in various contexts.

**Course Topics:**

- **Introduction to Differential Equations:**
  - Types of differential equations (ODEs, partial differential equations).
  - Initial value problems and boundary value problems.
- **First-Order ODEs:**
  - Separable equations, linear equations, and exact equations.
  - Applications in growth and decay, population dynamics, and circuits.
- **Second-Order ODEs:**
  - Homogeneous and nonhomogeneous equations.
  - Vibrations, oscillations, and resonance.
- **Systems of ODEs:**
  - Matrix notation and eigenvalues.
  - Phase portraits and stability analysis.

**Assessment:**

- Problem-solving exercises related to differential equations.
- Application of ODEs to real-world scenarios.
- Quizzes and exams covering theoretical concepts.

**Prerequisites:**

- Basic understanding of calculus and algebra.

**Recommended Readings:**

- “Elementary Differential Equations and Boundary Value Problems” by William E. Boyce and Richard C. DiPrima.
- Research articles on applications of differential equations.

**Grading:**

- Grading based on participation, assignments, and comprehension.

**Module Title: BIM324 - General Management**

**Course Description:**

BIM324 equips students with essential skills and knowledge related to managing employees and day-to-day operations within organizations. The course covers various aspects of effective management, including recruitment, goal-setting, motivation, communication, and financial responsibilities.

**Learning Objectives:**

By the end of the course, students should be able to:

- Understand the principles of effective management.
- Apply management techniques to real-world scenarios.
- Foster a positive work culture and employee engagement.
- Handle technology, equipment, and organizational challenges.
- Perform basic bookkeeping and human resources tasks.

**Course Topics:**

- **Recruitment and Hiring:**
  - Interviewing techniques and candidate selection.
  - Legal considerations in hiring.
- **Employee Training and Development:**
  - Onboarding and continuous learning.
  - Setting performance goals and objectives.
- **Motivation and Employee Engagement:**
  - Incentive systems and recognition.
  - Building a positive work environment.
- **Communication and Organizational Culture:**
  - Effective communication channels.
  - Aligning corporate values with employee behavior.

- **Financial Responsibilities and Budgeting:**
  - Basic bookkeeping principles.
  - Managing payroll and expenses.

**Assessment:**

- Case studies analyzing management scenarios.
- Role-playing exercises in employee interactions.
- Written reports on organizational challenges.

**Prerequisites:**

- Open to all students interested in management principles.

**Recommended Readings:**

- “The Practice of Management” by Peter F. Drucker.
- Research articles on contemporary management practices.

**Grading:**

- Grading based on participation, assignments, and comprehension.

**Module Title: BIM325 - International Economics**

**Course Description:**

BIM325 explores the dynamic field of international economics, focusing on global trade, monetary relations, and economic interdependence. The course covers both positive (descriptive) and normative (prescriptive) aspects of international trade. Students learn about the impact of openness on production, industries, occupations, and innovation across countries.

**Learning Objectives:**

By the end of the course, students should be able to:

- Understand the principles of international trade.
- Analyze the effects of globalization on economic activities.
- Evaluate policy choices and their implications for people and nations.
- Apply economic data analysis to real-world scenarios.

**Course Topics:**

- **Positive Issues in International Trade:**
  - Comparative advantage and gains from trade.
  - Trade patterns and specialization.
- **Normative Issues in International Economics:**
  - Distributional effects of trade.
  - Trade policies (tariffs, quotas, subsidies).
- **Globalization and Production Location:**

- Offshoring, outsourcing, and supply chains.
- Impact on industries and occupations.
- **Monetary Relations and Exchange Rates:**
  - Currency markets and exchange rate determination.
  - Balance of payments and capital flows.
- **Policy Choices and Global Impact:**
  - Trade agreements (WTO, regional blocs).
  - Economic development and poverty reduction.

**Assessment:**

- Case studies analyzing international trade scenarios.
- Policy analysis and economic modeling.
- Written reports on global economic trends.

**Prerequisites:**

- Basic understanding of economics and statistical concepts.

**Recommended Readings:**

- “International Economics” by Paul Krugman and Maurice Obstfeld.
- Research articles on contemporary global economic issues.

**Grading:**

- Grading based on participation, assignments, and comprehension.

**Module Title: BIM326 - Technology and Innovation**

**Course Description:**

BIM326 focuses on managing innovation and technology within organizations. The course covers essential topics related to innovation types, processes, value creation, and management activities. Students learn how to develop effective technology strategies to create and deliver value.

**Learning Objectives:**

By the end of the course, students should be able to:

- Understand the principles of innovation management.
- Apply technology strategies to solve real-world problems.
- Foster creativity and innovation within their organizations.

**Course Topics:**

- **Introduction to Innovation Management:**
  - Scope and content of strategic technology management.



- Analyzing innovation processes.
- **Tools of Technology Management:**
  - Technology S curves and industry evolution.
  - Exploring new markets and technology alternatives.
- **Theoretical Perspectives in Innovation Management:**
  - Addressing the innovator's dilemma.
  - Responding to discontinuous technological change.
- **Design Thinking and Innovation:**
  - Structured problem-solving using design thinking.
  - Applying innovation to various domains.

**Assessment:**

- Case studies analyzing real-world innovation scenarios.
- Application of technology management tools.
- Group projects on technology strategy development.

**Prerequisites:**

- Open to all students interested in technology and innovation.

**Recommended Readings:**

- "The Innovator's Dilemma" by Clayton Christensen.
- Research articles on technology management practices.

**Grading:**

- Grading based on participation, assignments, and comprehension.

**Module Title: BIM327 - Risk Management**

**Course Description:**

BIM327 focuses on bank risk management in the digital age. The course covers various types of risks inherent to banking, emerging trends, and their implications for future risk management. Students learn to view risk holistically, identify and manage risks within their roles, and prepare for future challenges.

**Learning Objectives:**

By the end of the course, students should be able to:

- Understand the principles of risk management in banking.
- Analyze emerging risks driven by technological advancements.
- Apply risk mitigation strategies within the context of their roles.
- Anticipate and prepare for future risk scenarios.

**Course Topics:**

- **Introduction to Bank Risk Management:**

- Role of risk management in banking.
- Regulatory requirements and best practices.
- **Types of Banking Risks:**
  - Credit risk, market risk, operational risk.
  - Liquidity risk and cybersecurity risk.
- **Emerging Trends and Risks:**
  - Digital transformation and fintech innovations.
  - Impact of AI, blockchain, and data analytics.
- **Risk Mitigation Strategies:**
  - Risk assessment frameworks.
  - Stress testing and scenario analysis.
- **Preparing for the Future:**
  - Resilience planning and adaptive strategies.
  - Ethical considerations in risk management.

**Assessment:**

- Case studies analyzing real-world banking risk scenarios.
- Risk modeling exercises.
- Written reports on risk management strategies.

**Prerequisites:**

- Basic understanding of banking operations and financial services.

**Recommended Readings:**

- “Bank Risk Management in a Digital Age” by John Doe.
- Research articles on emerging risks and technological impact.

**Grading:**

- Grading based on participation, assignments, and comprehension.

**Module Title: BIM328 - Theory of Interest**

**Course Description:**

BIM328 explores the fundamental concepts related to interest rates, annuities, and financial derivatives. The course covers topics such as simple and compound interest, time value of money, cash flow analysis, and bond valuation. Students learn to apply mathematical principles to financial transactions involving interest.

**Learning Objectives:**

By the end of the course, students should be able to:

- Understand the measurement of interest and force of interest.
- Analyze annuities and amortization schedules.
- Evaluate bonds and other securities.
- Apply financial derivatives concepts.

**Course Topics:**

- **Interest Measurement and Force of Interest:**
  - Simple and compound interest.
  - Time value of money.
  - Annuities-certain.
- **Financial Derivatives Introduction:**
  - Basics of financial derivatives.
  - Options and futures.
- **Cash Flow Analysis and Amortization:**
  - Sinking funds and loan schedules.
  - Bond valuation and yield rates.

**Assessment:**

- Problem-solving exercises related to interest calculations.
- Application of financial formulas to real-world scenarios.
- Written reports on bond valuation and derivatives.

**Prerequisites:**

- Basic understanding of mathematics and financial concepts.

**Recommended Readings:**

- “Mathematical Interest Theory” by James Daniel and Leslie Vaaler.

**Grading:**

- Grading based on participation, assignments, and comprehension.

**Module Title: BIM329 - Financial Management****Course Description:**

BIM329 introduces students to fundamental principles in finance. The course covers essential topics related to cash flow, time value of money, valuation of firms and financial assets, and capital budgeting.

**Learning Objectives:**

By the end of the course, students should be able to:

- Understand the importance of cash flow management.
- Apply time value of money concepts to financial decisions.
- Evaluate firm valuation and asset pricing.
- Analyze investment opportunities using capital budgeting techniques.

**Course Topics:**

- **Cash Flow Management:**

- Operating, investing, and financing cash flows.
- Cash flow forecasting and liquidity management.
- **Time Value of Money:**
  - Present value and future value calculations.
  - Discounted cash flow analysis.
- **Valuation of Firms and Financial Assets:**
  - Equity valuation models (dividend discount model, free cash flow model).
  - Bond pricing and yield calculations.
- **Capital Budgeting:**
  - Project evaluation techniques (NPV, IRR, payback period).
  - Risk assessment in capital investment decisions.

#### **Assessment:**

- Case studies analyzing real-world financial scenarios.
- Application of financial formulas to investment decisions.
- Written reports on firm valuation and capital budgeting.

#### **Prerequisites:**

- Basic understanding of financial concepts.

#### **Recommended Readings:**

- “Principles of Corporate Finance” by Brealey, Myers, and Allen.
- Research articles on financial management practices.

#### **Grading:**

- Grading based on participation, assignments, and comprehension.

### **Course Title: BIM330 Investment Management**

#### **Course Description**

This course equips students with the skills and knowledge necessary for effective investment management. Topics covered include investment strategies, portfolio management, risk assessment, financial analysis, trading strategies, behavioral economics, correlation, dependence, performance management, and securities trading.

#### **Learning Objectives**

By the end of this course, students will be able to:

1. Understand the role of investment managers in financial markets.
2. Analyze financial markets and their significance.
3. Identify major players in financial markets.
4. Differentiate between active and passive investment strategies.
5. Evaluate risk and return expectations.
6. Apply modern portfolio theory to construct efficient portfolios.

7. Measure portfolio performance using relevant metrics.
8. Explore various investment products available in the market.
9. Participate in investment simulations as active fund managers.
10. Execute equity and bond trades on behalf of clients.

### **Unit 1: Introduction to Investment Management**

- Understanding Investment Management
  - Role of investment managers
  - Structure and significance of financial markets
  - Key players: investment banks, investors, borrowers
  - Bespoke investment management process
  - Active vs. passive investment strategies

### **Unit 2: Asset Classes for Investment**

- Asset Allocation and Investment Products
  - Language and jargon related to major asset classes
  - Features of equity, government bonds, corporate bonds, and foreign exchange

### **Unit 3: Risk and Return**

- Managing Risk and Assessing Returns
  - Clients' risk and return expectations
  - Portfolio construction using modern portfolio theory
  - Performance measurement (Sharpe ratio, information ratio)

### **Unit 4: Investment Products and Strategies**

#### **Investment Products and Trading Strategies**

- Overview of investment products
- Investment simulation: active fund management
- Equity and bond trading on behalf of clients

### **Assessment and Grading**

- **Assessment Methods:**
  - Quizzes and exams
  - Investment portfolio projects
  - Participation in investment simulations
- **Grading Criteria:**
  - Quizzes and exams: 40%
  - Investment projects: 40%
  - Participation: 20%

## **BIM331 Business Research Methods**

### **Course Description**

This course equips students with the skills and knowledge necessary for effective research in a business context. It covers various aspects of research, including research design, data collection methods, data analysis, and report writing. The course aims to help students learn how to conduct relevant research that informs business decision-making.

### **Learning Objectives**

By the end of this course, students will be able to:

1. Analyze the research process.
2. Identify research problems.
3. Compare different research methodologies.
4. Evaluate relevant literature in the research area.
5. Determine techniques for negotiating access and sampling.
6. Distinguish various data collection methods.

### **Course Outline**

1. **Introduction to Business Research**
  - Overview of the research process
  - Philosophical foundations of research design
  - Role of research in business decision-making
2. **Research Design and Methodologies**
  - Quantitative vs. qualitative research
  - Selecting appropriate research methods
  - Developing research questions and hypotheses
3. **Data Collection Methods**
  - Surveys and questionnaires
  - Interviews (structured and unstructured)
  - Observations and case studies
4. **Data Analysis Techniques**
  - Descriptive statistics
  - Inferential statistics (hypothesis testing, regression analysis)
  - Qualitative data analysis (thematic analysis, content analysis)
5. **Report Writing and Communication**
  - Organizing research findings
  - Writing research reports
  - Presenting results effectively

## **BIM332 Global Banking Operations**

### **Course Description**

This course provides an in-depth understanding of global banking business and operations. It covers essential topics related to modern global financial institutions, their organization, product offerings, risk management, and regulatory frameworks. Students will gain the necessary knowledge and skills to effectively manage global banking operations, mitigate risks, and enhance customer satisfaction.

### **Learning Objectives**

By the end of this course, students will be able to:

1. **Understand Global Banking Environment:**
  - Analyze the global banking landscape.
  - Explore the impact of globalization on financial institutions.
  - Identify key players and stakeholders in global banking.
2. **Organizational Behavior in Banking:**
  - Study organizational structures within banks.
  - Examine leadership and management practices.
  - Understand cultural diversity and its implications.
3. **Global Marketing Strategies for Banks:**
  - Develop marketing strategies for financial products.
  - Explore cross-border marketing challenges.
  - Address cultural nuances in marketing.
4. **International Banking Law and Regulation:**
  - Overview of international banking regulations.
  - Compliance requirements for cross-border operations.
  - Legal considerations in global transactions.
5. **Risk Management in Global Banking:**
  - Types of risks faced by global banks (credit, market, operational).
  - Risk assessment and mitigation strategies.
  - Stress testing and scenario analysis.
6. **Customer Satisfaction and Service Excellence:**
  - Enhance customer experience in a global context.
  - Implement effective customer service practices.
  - Address cultural differences in customer interactions.

## Assessment and Grading

- **Assessment Methods:**
  - Quizzes and exams
  - Case studies and group projects
  - Presentations
- **Grading Criteria:**
  - Quizzes and exams: 40%
  - Assignments and projects: 40%
  - Participation and presentations: 20%

## BIM333: Internship

### Course Description

The **BIM333: Internship** course offers students the opportunity to gain practical experience in the banking and investment field. Through structured, supervised internships, students will work within organizations to apply their knowledge and skills in real-world settings. The course emphasizes learning goals, reflective assignments, and professional development.

### Learning Objectives

By the end of the internship, students will be able to:

1. Apply theoretical knowledge to practical situations in the banking and investment industry.
2. Demonstrate professional behavior and effective communication within an organizational context.
3. Collaborate with colleagues and supervisors to achieve organizational goals.
4. Reflect on their experiences and learning outcomes during the internship.

## **Course Structure**

1. **Pre-Internship Preparation**
  - Understanding internship expectations and guidelines
  - Identifying learning goals and objectives
  - Resume building and interview preparation
2. **Internship Placement**
  - Placement within a banking or investment organization
  - Supervision by an academic faculty member and an internship supervisor
  - Regular check-ins and progress assessments
3. **Work Experience and Learning**
  - Engaging in day-to-day tasks related to banking and investment
  - Applying knowledge from coursework to practical scenarios
  - Developing professional skills (communication, teamwork, problem-solving)
4. **Reflective Assignments**
  - Journal entries documenting experiences and insights
  - Analyzing challenges faced and lessons learned
  - Connecting theory to practice
5. **Final Assessment and Evaluation**
  - Presentation or report summarizing internship experiences
  - Evaluation by both academic and professional supervisors

## **Assessment**

- Pass/Fail based on successful completion of internship requirements
- Evaluation of reflective assignments and final assessment

## **BIM434: International Bank Management and Strategy**

### **Course Description**

This course is designed to prepare students for managing international banks and investment firms within the dynamic global business environment. As the business landscape evolves, changes occur across various dimensions, including political, economic, technological, cultural, and industry-specific factors. The course delves into strategic planning, risk management, and leadership development, emphasizing the contextual, organizational, and managerial challenges faced by multinational firms.

### **Learning Objectives**

By the end of this course, students will be able to:

1. **Understand Global Banking Environment:**



- Analyze the impact of political, economic, and technological changes on international banks.
- Explore cultural nuances and industry-specific challenges.
- Identify opportunities and threats in the global banking landscape.
- 2. **Strategic Planning for International Banks:**
  - Formulate effective strategies for international expansion.
  - Evaluate business models and competitive positioning.
  - Address regulatory and compliance considerations.
- 3. **Risk Management in a Global Context:**
  - Assess risks associated with cross-border operations.
  - Implement risk mitigation strategies.
  - Understand the role of risk culture in international banking.
- 4. **Leadership Development and Organizational Culture:**
  - Develop leadership skills relevant to multinational banking.
  - Navigate cultural diversity within organizations.
  - Foster an adaptive and resilient organizational culture.

## Course Outline

1. **Introduction to International Bank Management**
  - Overview of global banking trends
  - Multinational vs. domestic banking
  - Cultural intelligence for international managers
2. **Strategic Decision-Making**
  - Business environment analysis
  - Competitive positioning and differentiation
  - Strategic alliances and partnerships
3. **Risk Management Strategies**
  - Currency risk and interest rate risk
  - Credit risk and operational risk
  - Basel framework and regulatory compliance
4. **Leadership and Organizational Culture**
  - Leadership styles in a global context
  - Cross-cultural communication and negotiation
  - Building a resilient organizational culture

## Assessment and Grading

- Quizzes, case studies, and group projects
- Final presentation or report on a real-world international banking scenario

## BIM435: Multivariate Data Analysis

### Course Description

This course provides knowledge and practical skills in multivariate statistics. It covers theory, calculation techniques, and applications related to multivariate data analysis. The course delves into various topics, including matrix algebra, multivariate normal distribution, statistical inference, confirmatory factor analysis, multivariate analysis of variance, discriminant analysis, and structural equation models. The course is taught at an intermediate statistical level, emphasizing both theoretical understanding and practical applications.

## Learning Objectives

By the end of this course, students will be able to:

1. Understand the fundamental concepts of multivariate statistics.
2. Apply appropriate techniques for analyzing multivariate data.
3. Interpret results from multivariate analyses.
4. Utilize statistical software (such as R) effectively.

## Course Outline

1. **Matrix Algebra**
  - Basics of matrix operations
  - Eigenvalues and eigenvectors
  - Matrix decompositions (e.g., singular value decomposition)
2. **Multivariate Normal Distribution and Inference**
  - Properties of multivariate normal distributions
  - Maximum likelihood estimation
  - Hypothesis testing for multivariate normal data
3. **Confirmatory Factor Analysis (CFA)**
  - Model specification and estimation
  - Assessing model fit
  - Interpreting factor loadings and latent variables
4. **Multivariate Analysis of Variance (MANOVA)**
  - Comparing means across multiple groups
  - MANOVA assumptions and diagnostics
  - Post hoc tests and effect sizes
5. **Discriminant Analysis**
  - Classification based on predictor variables
  - Fisher's discriminant function
  - Assessing classification accuracy
6. **Structural Equation Models (SEM)**
  - Path diagrams and model specification
  - Estimation methods (e.g., maximum likelihood)
  - Model fit indices

## Assessment and Grading

- Written exams (80%)
- Coursework (20%)

Recommended Textbooks:

- Johnson, R.A., Wichern, D.W. (2007). *Applied Multivariate Statistical Analysis* (6th edition). Pearson Prentice Hall.
- Manly, B.F.J. (2005). *Multivariate Statistical Methods: A Primer* (3rd edition). Chapman & Hall/CRC.
- Everitt, B.S., Dunn, G. (2010). *Applied Multivariate Data Analysis* (2nd edition). Wiley.
- Everitt, B.S., Hothorn, T. (2011). *An Introduction to Applied Multivariate Analysis with R*. Springer.

## Course Description

This course emphasizes the strategic aspects of corporate management and methodological issues related to value-based management systems. It explores measures and approaches for evaluating corporate strategy effectiveness and monitoring strategic outcomes.

## Learning Objectives

By the end of this course, students will be able to:

1. Understand the role of strategic finance in corporate decision-making.
2. Apply financial criteria to strategic choices.
3. Evaluate the impact of strategic decisions on value creation.
4. Monitor and assess the effectiveness of corporate strategies.

## Course Outline

1. **Introduction to Strategic Finance**
  - Defining strategic finance
  - Linking financial decisions to overall business strategy
  - Role of financial managers in strategic planning
2. **Value-Based Management Systems**
  - Economic value added (EVA) and its components
  - Cost of capital and capital budgeting
  - Aligning investments with strategic goals
3. **Measuring Corporate Strategy Effectiveness**
  - Key performance indicators (KPIs) for strategy evaluation
  - Balanced scorecard approach
  - Financial and non-financial metrics
4. **Strategy Monitoring and Adaptation**
  - Tracking strategic initiatives
  - Scenario analysis and sensitivity testing
  - Flexibility in strategic decision-making

## Assessment and Grading

- Assignments and case studies
- Final project related to strategic finance analysis

## BIM437: Loss Models

### Course Description

The **BIM437: Loss Models** course focuses on the analysis of aggregate losses in insurance and risk management. It covers essential quantitative techniques related to loss modeling, emphasizing real-world applications and practical calculations. The course explores various aspects of loss data, including random variables, distributional quantities, and estimation methods. Whether you're interested in actuarial science, risk assessment, or financial modeling, this course provides valuable insights into understanding and managing loss processes.

## Learning Objectives

By the end of this course, students will be able to:

1. Understand the fundamental concepts of loss modeling.
2. Apply statistical techniques to analyze loss data.
3. Evaluate different distributional models for aggregate losses.
4. Estimate risk measures and assess model performance.

## Course Outline

1. **Introduction to Loss Models**
  - Overview of aggregate loss data
  - Importance of loss modeling in insurance and risk management
  - Role of random variables in modeling losses
2. **Basic Distributional Quantities**
  - Moments (mean, variance, skewness, kurtosis)
  - Percentiles and quantiles
  - Generating functions
3. **Severity Models**
  - Parametric distributions (e.g., exponential, gamma, Weibull)
  - Non-parametric approaches
  - Splicing and mixing distributions
4. **Frequency Models**
  - Poisson distribution
  - Negative binomial distribution
  - Zero-inflated and hurdle models
5. **Aggregate Models**
  - Collective risk models
  - Individual risk models
  - Ruin theory and risk measures
6. **Estimation Methods**
  - Maximum likelihood estimation
  - Bayesian estimation
  - Goodness-of-fit assessment

## Textbook

- **Loss Models: From Data to Decisions**, by Klugman, S.A., Panjer, H.H., and Willmot, G.E. (Fourth Edition, John Wiley and Sons, Inc., 2012)

## BIM438: Stochastic Processes

### Course Description

Stochastic processes are collections of random variables that evolve over time or space. In this course, we explore the theoretical foundations and practical techniques for analyzing stochastic systems. Students will gain insights into various types of stochastic processes, including Markov chains, Poisson processes, and birth-and-death processes.

### Learning Objectives

By the end of this course, students will be able to:

1. Understand the fundamental concepts of stochastic processes.
2. Apply stochastic modeling techniques to real-world scenarios.
3. Analyze Markov chains and other key processes.
4. Explore the probabilistic behavior of systems.

## Course Outline

1. **Introduction to Stochastic Processes**
  - Definition and significance of stochastic processes
  - Applications in various fields (e.g., finance, engineering, biology)
  - Basic terminology (random variables, time index, state space)
2. **Markov Chains**
  - Discrete-time Markov chains
  - Transition probabilities and state transitions
  - Stationary distributions and limiting behavior
3. **Poisson Processes**
  - Modeling rare events and arrivals
  - Intensity function and inter-arrival times
  - Applications (queueing theory, reliability analysis)
4. **Birth-and-Death Processes**
  - Birth and death rates
  - Steady-state probabilities
  - Absorption probabilities

## Assessment and Grading

- Homework assignments
- Quizzes or tests
- Final examination

For additional resources, consider exploring textbooks such as:

- *Introduction to Stochastic Processes* by G.F. Lawler
- *An Introduction to Stochastic Modeling* by H.M. Taylor and S. Karlin
- *A First Course in Stochastic Processes* by Samuel Karlin and Howard M. Taylor
- *Adventures in Stochastic Processes* by S. Resnick
- *Elementary Stochastic Calculus with Finance in View* by Thomas Mikosch
- *Stochastic Processes* by S. Ross

## BIM439: Alternative Investment, Derivatives, and Portfolio Management

### Course Description

This course provides students with a comprehensive understanding of alternative investments, derivatives, and portfolio management. It explores various financial instruments, including options, futures, swaps, ETFs, structured notes, and convertible bonds. Students will gain practical experience in evaluating alternative investments, such as private equity, private debt, hedge funds, and real estate. The course emphasizes risk assessment, liquidity considerations, and the role of these investments in diversified portfolios.

## Learning Objectives

By the end of this course, students will be able to:

1. Understand the characteristics and valuation of alternative investments.
2. Analyze the risk-return profiles of different financial instruments.
3. Construct and manage portfolios incorporating alternative assets.
4. Evaluate the impact of derivatives on investment strategies.

## Course Outline

1. **Introduction to Alternative Investments**
  - Definition and types of alternative investments
  - Role of alternatives in portfolio diversification
  - Risk factors and liquidity considerations
2. **Private Equity and Venture Capital**
  - Structuring private equity deals
  - Due diligence and valuation methods
  - Exit strategies and performance measurement
3. **Hedge Funds and Managed Futures**
  - Hedge fund strategies (long-short, market-neutral, event-driven)
  - Risk management in hedge funds
  - Managed futures and commodity trading advisors (CTAs)
4. **Real Estate Investments**
  - Real estate valuation techniques
  - REITs (Real Estate Investment Trusts)
  - Property development and financing
5. **Derivatives and Their Applications**
  - Options and futures contracts
  - Swaps (interest rate, currency, credit)
  - Structured products (notes, certificates)
6. **Portfolio Management with Alternatives**
  - Portfolio construction using alternative assets
  - Risk-adjusted performance evaluation
  - Impact of alternatives on overall portfolio risk

## Assessment and Grading

- Assignments, case studies, and simulations
- Final project analyzing a portfolio with alternative investments

## BIM440: Econometrics

### Course Description

This course provides essential knowledge and practical skills in econometrics, which is crucial for understanding empirical economic research and conducting independent research projects. Topics covered include statistical inference, regression analysis, generalized least squares, instrumental variables, simultaneous equations models, and policy evaluation.

### Learning Objectives

By the end of this course, students will be able to:

1. Understand the fundamental concepts of econometrics.
2. Apply statistical techniques to analyze economic data.
3. Interpret regression results and draw meaningful conclusions.
4. Evaluate the impact of government policies using econometric methods.

## Course Outline

1. **Introduction to Econometrics**
  - Role of econometrics in economic analysis
  - Data types and sources
  - Descriptive statistics and data visualization
2. **Statistical Inference**
  - Hypothesis testing and confidence intervals
  - Parametric vs. non-parametric tests
  - Goodness-of-fit measures
3. **Regression Analysis**
  - Simple linear regression
  - Multiple regression models
  - Assumptions and diagnostics
4. **Generalized Least Squares (GLS)**
  - Heteroskedasticity and autocorrelation
  - Weighted least squares
  - Robust standard errors
5. **Instrumental Variables (IV) and Simultaneous Equations Models**
  - Endogeneity and omitted variable bias
  - Two-stage least squares (2SLS)
  - Structural equations and identification
6. **Policy Evaluation**
  - Causal inference and treatment effects
  - Regression discontinuity design
  - Difference-in-differences approach

## Assessment and Grading

- Assignments and problem sets
- Midterm exam
- Final project applying econometric methods to real-world data

## BIM441: Statistical Learning

### Course Description

Statistical learning is a fundamental area in data science and machine learning. This course introduces supervised learning techniques, emphasizing regression and classification methods. Students will explore various statistical models and tools used for predictive modeling and decision-making. The syllabus covers essential topics related to linear regression, logistic regression, model selection, regularization, tree-based methods, and more.

### Learning Objectives

By the end of this course, students will be able to:

1. Understand the principles of statistical learning.
2. Apply regression and classification methods to real-world data.
3. Evaluate model performance and interpret results.
4. Explore both supervised and unsupervised learning techniques.

## Course Outline

1. **Introduction to Statistical Learning**
  - Overview of supervised learning
  - Key concepts: bias-variance trade-off, overfitting
  - Model evaluation metrics (RMSE, accuracy, etc.)
2. **Linear Regression**
  - Simple linear regression
  - Multiple regression
  - Model interpretation and diagnostics
3. **Logistic Regression and Linear Discriminant Analysis**
  - Binary classification
  - Odds ratios and log-odds
  - Discriminant analysis for multiclass problems
4. **Model Selection and Regularization**
  - Cross-validation
  - Ridge regression (L2 regularization)
  - Lasso regression (L1 regularization)
5. **Nonlinear Models and Splines**
  - Polynomial regression
  - Generalized additive models (GAMs)
  - Natural cubic splines
6. **Tree-Based Methods**
  - Decision trees
  - Random forests
  - Boosting (AdaBoost, gradient boosting)
7. **Support Vector Machines (SVM)**
  - Margin maximization
  - Kernel methods
  - Hyperplane classifiers
8. **Unsupervised Learning**
  - Principal component analysis (PCA)
  - Clustering (k-means, hierarchical)

## Assessment and Grading

- Assignments and practical exercises
- Midterm exam
- Final project applying statistical learning techniques

## BIM442: Survival Methods

### Course Description



Survival methods, also known as survival analysis or event history analysis, focus on modeling the time until an event occurs. This course introduces students to the principles, techniques, and applications of survival analysis. The emphasis is on understanding stochastic processes related to life history analysis and actuarial applications. Students will explore various types of stochastic processes, including Markov chains, Poisson processes, and renewal processes, and their relevance in insurance and risk theory.

## Learning Objectives

By the end of this course, students will be able to:

1. Understand the fundamental concepts of survival analysis.
2. Apply survival models to real-world data.
3. Interpret survival curves and hazard functions.
4. Explore time-to-event data in insurance and actuarial contexts.

## Course Outline

1. **Introduction to Survival Analysis**
  - Definition of survival time and censoring
  - Kaplan-Meier estimator for survival curves
  - Log-rank test for comparing survival distributions
2. **Stochastic Processes in Survival Analysis**
  - Time space vs. state space
  - Classification of stochastic processes
  - Finite-dimensional distributions and independence
3. **Poisson Processes and Renewal Processes**
  - Modeling event occurrences
  - Applications in insurance claims
  - Hazard rates and intensity functions
4. **Markov Chains and Their Applications**
  - Transition probabilities
  - Absorbing states and recurrent events
  - Life insurance policies and policy durations
5. **Extensions to Intensity-Driven Processes**
  - Semi-Markov processes
  - Stationary distributions
  - Applications in risk theory
6. **Counting Processes and Time-Dependent Covariates**
  - Cox proportional hazards model
  - Time-varying covariates
  - Predictive modeling for survival data

## Assessment and Grading

- Assignments and practical exercises
- Midterm exam
- Final project applying survival methods to actuarial scenarios

For additional resources, consider exploring textbooks such as:

- *Survival Analysis: Techniques for Censored and Truncated Data* by Klein and Moeschberger

- *Applied Survival Analysis: Regression Modeling of Time-to-Event Data* by Hosmer, Lemeshow, and May

## **BIM443: Banking Project**

### **Course Description**

The **BIM443: Banking Project** course focuses on guiding students through the process of planning, executing, and documenting a research project related to banking. Students will work closely with an academic supervisor and engage in original research. The course emphasizes methodological choices, critical thinking, and relevance to significant discussions within the banking discipline.

### **Learning Objectives**

By the end of this course, students will be able to:

1. Develop a clear research question or problem related to banking.
2. Apply appropriate research methods and techniques.
3. Execute the research project systematically.
4. Communicate findings effectively through a research report or dissertation.

### **Course Outline**

1. **Project Proposal and Research Question**
  - Identifying a relevant banking topic
  - Formulating a research question
  - Literature review and background research
2. **Methodological Choices**
  - Quantitative vs. qualitative research
  - Data collection methods (surveys, interviews, archival data)
  - Ethical considerations
3. **Data Analysis and Interpretation**
  - Analyzing banking data
  - Statistical techniques (descriptive statistics, regression, etc.)
  - Drawing meaningful conclusions
4. **Research Report or Dissertation**
  - Structuring the document (introduction, methodology, results, discussion)
  - Writing clearly and concisely
  - Referencing and citing sources appropriately
5. **Presentation and Defense**
  - Presenting research findings to peers and faculty
  - Addressing questions and feedback
  - Reflecting on the research process

### **Assessment and Grading**

- Research proposal and project plan
- Research report or dissertation
- Oral presentation and defense

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