

# International College

## Accountancy Program (ACC)

### Professional Foundation Courses

IAC 151 Principles of Accounting I 3(2-2-5)

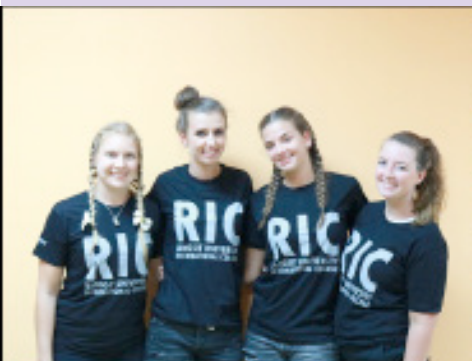
Definition and objectives of accounting; benefits of accounting information; accounting framework; regulations and Acts related to accounting; code of ethics for accounting profession; corporate governance; principles and methods of accounting recording based on double entry principles; accounting procedure; accounting cycle; preparing trial balance; worksheet; accounting for inventory; financial statement for merchandise and service businesses, and special journals

IAC 152 Principles of Accounting II 3(2-2-5)

Accounting for manufacturing business; statements of cash flow and statements of change in equity; cash control and petty cash; bank reconciliation; voucher system; accounting for payroll and owners' equity

ITE 111 Introduction to Information Systems 3(3-0-6)

Core aspects of information systems: information systems in organization, persons in information systems, organizational applications, the strategic role of information systems, and study technology in information systems: hardware and software interaction, CPU structure and function, memory system organization, I/O systems etc.



**IAC 325 Taxation I 3(3-0-6)**

Rules, the assessment and tax collection procedures in accordance to revenue code and other taxes: personal taxes, corporate income taxes, value-added taxes, special business taxes, withholding taxes and customs taxes, excise taxes, revenue stamp and others

**IEC 211 Principles of Microeconomics 3(3-0-6)**

How resources are allocated through market mechanism, consumer behaviors and utilities, behaviors of firms, production cost and profit, price determination in product and manufacturing factor markets and resource allocation efficiency in different types of market structure, and government regulation of markets

**IEC 212 Principles of Macroeconomics 3(3-0-6)**

The national income and its composition, determination of income, employment and price, roles of government, money, and other external factors in the income determination, and policies to alleviate inflation and unemployment

**IEG 457 English for Practical Business 3(3-0-6)**

*Prerequisite : IEG 107 Business English*

To develop students' four skills on practical business and professional communication. Instructions focus on four language skills with emphasis on listening and speaking

**IFN 201 Business Finance 3(3-0-6)**

*Prerequisite : IAC 151 Principles of Accounting I*

The importance and goal of financial management, forms of business and business tax necessary for financial management, roles of financial managers, financial analysis and planning, financial division in short-term, intermediate, and long-term capital, investment project analysis, financial structure, cost of capital and the dividend policy

**ILA 112 Business Law 3(3-0-6)**

*Prerequisite : ILA 108 Introduction to Law*

Characteristics of business organizations; partnerships, companies, management control, auditing, inspection, increases and reductions of capital, debentures, dissolution, amalgamation, bankruptcy, revive business, roles of financial institutions and commercial banks and stocks exchanges, including laws concern business organizations, business negotiation and contract drafting, settlement of commercial disputes and arbitration, trade competition, industrial law, consumer protection law, economic international trade law, Asian Law, and future trends on the conclusion of international agreements on investment liberalization within APEC

**IMA 143 Mathematics for Business and Economics 3(3-0-6)**

Sets, number system, rectangular coordinate system, graphs, sequence and series, linear equation, quadratic function, polynomial function, exponential function, logarithmic function, matrices and determinants. Emphasizes work problems and application in business and economics areas

**IMA 144 Calculus for Business and Economics 3(3-0-6)**

*Prerequisite : IMA 143 Mathematics for Business and Economics*

The concept of functions, graphs, and limits, Differentiation : basic concept. Additional application of the derivative, exponential and logarithmic functions, integration. Further topics in integration . Functions of two variables, Infinite series and Taylor Approximation. The course is designed for students preparing for a career in business and economics

**IMG 201 Modern Management and Organization Behavior 3(3-0-6)**

The process of management related to planning, organization, leading and controlling. The course also includes organizational behaviors such as leadership, motivation, communication, managing groups, team building, managing changes and organizational culture.

- IMG 416 Strategic Management** 3(3-0-6)  
 Prerequisite: IMG201 Modern Management and Organization Behavior  
 Meaning and importance of strategic management; the components of strategy, the strategic management process, level of strategy and types of strategies including choosing appropriate strategies suited to business situations for successful and effective operation
- IMK 201 Principles of Marketing** 3(3-0-6)  
 Definition and marketing concept, scope, importance and functions in product management, physical distribution planning; pricing policy; promotion; analysis and selection of target markets, marketing environment, and marketing control
- IPO 201 Operations Management** 3(3-0-6)  
 Production functions including the selection of the plant location, plant layout and design, the analysis of work system, quality control and inventory
- IPO 203 Management Science for Business Decision** 3(3-0-6)  
*Prerequisite : IMA 143 Mathematics for Business and Economics*  
 The concepts and application of management science for business decisions. This course provides theory and method of statistical and mathematical model to supplement managerial judgment including the use of software package in the analysis process

## Major Courses

---

- IAC 251 Intermediate Accounting I** 3(2-2-5)  
*Prerequisite : IAC 151 Principles of Accounting I*  
 Principles and procedure for assets; categories of assets; recognition and measurement of assets; valuation; allocating assets to cost and expenses based on accounting principles; impairment of assets; presentation of assets in financial statement and disclosures

**IAC 252 Intermediate Accounting II 3(2-2-5)***Prerequisite : IAC 151 Principles of Accounting I*

Principles and accounting procedure for owners' equity and liabilities: classification of liabilities, recognition and measurement of liabilities, valuation, presentation of liabilities in financial statement and disclosures, accounting for business formation, operation, change in owners' equity, dissolving and liquidation of partnerships, corporation and public corporation, presentation of owners' equity in balance sheet, and disclosures

**IAC 310 Auditing 3(3-0-6)***Prerequisite : IAC 251 Intermediate Accounting I*

IAC 252 Intermediate Accounting II

General concepts and framework of auditing standard; regulation and auditing acts; ethics and responsibility of auditors; fraud and errors; audit planning; audit risk and materiality; risk assessment; audit evidence; evidence collection and audit procedures; audit sampling; audit working paper; auditing assets, liabilities, stockholders' equity, revenues and expenses; auditor's report; approaches of auditing by computers; quality control of auditing

**IAC 321 Internal Auditing and Internal Control 3(3-0-6)***Prerequisite : IAC 151 Principles of Accounting I*

Corporate governance, internal control objectives and components; COSO based internal control, enterprise risk management (ERM) based on COSO concept; the evaluation of internal control effectiveness, internal audit concepts and establishing internal audit unit, ethics and internal auditing standards; types and process of internal audit; internal audit of key business activity of corporate including duty and responsibility of internal auditors in order to detect fraud

**IAC 326 Accounting Information Systems 3(3-0-6)***Prerequisite : IAC 151 Principles of Accounting I*

ITE 111 Introduction to Information Systems

Definition and components of accounting information systems; principles of documentation; analysis and design accounting information system; processing; control

of computer information system; document and information of cycle; internal control; document and accounting information flows; basic business cycles: subsystems in the revenue cycle, the expenditure cycle, the production cycle, and financial reporting cycle

**IAC 351 Cost Accounting 3(2-2-5)**

*Prerequisite : IAC 151 Principles of Accounting I*

Importance and role of cost accounting in organization; definition of costs; accounting system for cost; accounting procedure and control of materials, labor, manufacturing overheads; job order costing system; process costing system; standard costing system; joint and by-product costing, spoilage, waste, defective goods, scrap and activity-based costing

**IAC 352 Management Accounting 3(2-2-5)**

*Prerequisite : IAC 351 Cost Accounting*

Roles of management accounting in organization; cost terms and definitions; relationship of cost, volume and profit; full costing and variable costing; budgeting; variance analysis, cost analysis for decision making under certainty and uncertainty conditions; product pricing and transfer pricing; and performance evaluation

**IAC 353 Taxation II 3(3-0-6)**

*Prerequisite : IAC 251 Intermediate Accounting I*

IAC 252 Intermediate Accounting II

IAC 325 Taxation I

Concepts and differences between accounting principles and taxation for revenues and expenses recognition; preparation of working paper for calculating income tax per revenue code; adjustments for financial accounting-based income to taxable income; preparation of tax report and tax returns

**IAC 354 Advanced Accounting I 3(2-2-5)**

*Prerequisite : IAC 251 Intermediate Accounting I*

IAC 252 Intermediate Accounting II

Accounting policies; changes in accounting and errors; interim statements; accounting for foreign currency transactions and translation of foreign currency financial

statements; accounting for head office and branch; both domestic and international branch; construction contracts; consignment sales; installment sales; leases; real estate business and accounting for troubled debt restructuring

**IAC 429 Financial Reporting and Analysis 3(2-2-5)**

*Prerequisite : IAC 251 Intermediate Accounting I*

IAC 252 Intermediate Accounting II

Financial reports and disclosure of accounting information; procedures and tools of financial statement analysis; essential accounting information for decision making; money market and capital market; industry analysis; effects of different accounting policy on financial statements

**IAC 451 Advanced Accounting II 3(2-2-5)**

*Prerequisite : IAC 251 Intermediate Accounting I*

IAC 252 Intermediate Accounting II

Accounting for business combination; investment in subsidiaries and associated companies; accounting for joint ventures; preparation of consolidated financial statements; preparation of financial statements from incomplete record; fund and non-profit organization

**IAC 461 International Accounting 3(3-0-6)**

*Prerequisite : IAC 251 Intermediate Accounting I*

IAC 252 Intermediate Accounting II

Comparison of accounting principles and procedures of foreign countries; roles of international accounting standard committee, international financial reporting committee; impacts of economic environments; social and government policy on accounting policy, including accounting procedures of international businesses

**IAC 498 Co-operative Education 6(0-35-18)**

*Prerequisite : Student must have enrolled at least 24 credits in the Required Professional Courses category*

A systematic provision of work-based learning in the work place with the co-

operation between the university and the work place in order to develop both students' knowledge and work-related skills in the accounting. The period of co-operative education must be no less than 16 full weeks. The students will be evaluated through a report the experience from the work place or a piece of other creative work.

**IAC 499     Accounting Internship     3(0-24-12)**

*Prerequisite : Student must have enrolled at least 24 credits in the Required Professional Courses category*

An accounting internship in state enterprises, government agencies or private organizations. Students need to complete no less than 270 hours of internship. The students will be evaluated through a report the experience from the internship or a piece of other creative work.

### Elective Professional Courses

**IAC 312     Accounting for Specific Enterprises     3(3-0-6)**

*Prerequisite : IAC 151 Principles of Accounting I*

Operation characteristics of specific organizations; accounting and internal control of assets, liabilities, owner's equities, revenues and expenses; performance report and financial position of business such as banks, financial institutions, hospitals, hotels, agriculture, tourism , cooperatives, heritage and trustees, insurance, small and medium enterprises

**IAC 361     Public Sector Accounting     3(3-0-6)**

*Prerequisite : IAC 151 Principles of Accounting I*

Meaning, objectives, concepts and developments of public sector accounting; accounting policies and accounting standards of public sector; accounting systems and procedures of public sector; preparation and presentation of public sector's financial reports and government statement of expenditure



**IAC 491 Seminar in Financial Accounting 3(3-0-6)**

*Prerequisite : IAC 354 Advanced Accounting I*

Implementation of accounting framework and accounting standards in financial accounting practices for various corporations; current issues and problems of financial accounting and professional ethics

**IAC 433 Law pertaining to Accounting Profession 3(3-0-6)**

Laws relating to accounting profession, Accounting Profession Acts, Accounting Acts, Public Company Acts, Ministerial Regulations, Announcement or orders issued under those acts, as well as those issued by organizations charged with the supervision of practitioners in accounting profession; roles of relevant supervisory organizations: Securities Exchange Commission (SEC), Stock Exchange of Thailand (SET), Bank of Thailand (BOT), Insurance Commission and Revenue Department

**IAC 462 Information System Audit and Control 3(3-0-6)**

*Prerequisite : IAC 310 Auditing*

IAC 326 Accounting Information Systems

Concepts and effects of using computer system in accounting data processing; internal controls, computer fraud and preventive measures; risk assessment and evaluation of internal controls; analyses of data processing reliability; audit techniques for computer system and application of audit software generalized for auditing

**IAC 463 Forensic Accounting 3(3-0-6)**

*Prerequisite : IAC 310 Auditing*

Definition, concepts and, evolution of forensic accounting pattern; differences between forensic accounting and fraud audit; qualifications and responsibilities of forensic accounting investigators, forensic accounting professional institute, investigation techniques and methods and participating in trials for lawsuits

**IAC 481 Seminar in Auditing 3(3-0-6)**

*Prerequisite : IAC 310 Auditing*

Discussions, analysis, and researches to create in-depth knowledge and understanding in auditing standards and problems in auditing; how to solve such problems; current issues and special problems in the audit profession and professional ethics

**IAC 493 Seminar in Internal Auditing 3(3-0-6)**

*Prerequisite : IAC 321 Internal Auditing and Internal Control*

Problems encountered during the course of internal audit and how to solve them; current issues, specific problems in the internal audit profession and professional ethics

**IAC 333 Accounting Software Package 3(1-4-4)**

*Prerequisite : IAC 326 Accounting Information System*

General characteristics of accounting software package; the use of accounting software package in the preparation of transaction recording documents; recording in sub-systems: such as purchasing system, sales system, account payable system, account receivable system, inventory system, and general ledger system; financial statement preparation, financial data analysis and budgeting

**IAC 426 Accounting Information System Analysis and Design 3(3-0-6)**

*Prerequisite : IAC 326 Accounting Information System*

Concept and principles of accounting information system analysis and design; the feasibility study of the accounting information system development project; project management; presentation of accounting information system analysis and design projects; tools and techniques for accounting information system analysis and design based on accounting process and internal control system; the evaluation of internal controls of the accounting information system

- IAC 465 Database Management 3(3-0-6)**  
*Prerequisite : IAC 326 Accounting Information System*  
 Introduction to business database systems; architecture and objectives of database systems; concept, setting up database structure of different types; principles and tools for database system analysis and design using relational data model and application of database management systems in business
- IAC 466 Information System Security and Control 3(3-0-6)**  
*Prerequisite : IAC 326 Accounting Information System*  
 Security of information system; system development; control system and quality assurance of information system
- IAC 494 Seminar in Accounting Information System and Technology 3(3-0-6)**  
*Prerequisite : IAC 326 Accounting Information System*  
 Problems and current issues of technology application in accounting information systems, specific problems of technology and accounting information system and professional ethics
- IAC 362 Profit Planning and Control 3(3-0-6)**  
*Prerequisite : IAC 251 Intermediate Accounting I*  
 IAC 252 Intermediate Accounting II  
 Strategic planning, roles of profit planning and control and the performance evaluation of different types of organization; strategic planning and the utilization of the budgets as a tool for planning and effective controls; key performance indicators and reports for management and control
- IAC 437 Cost Management 3(3-0-6)**  
*Prerequisite : IAC 351 Cost Accounting*  
 Strategic costs management concepts: cost of quality, target costing, value-chains analysis and product life cycle costing; Just-In-Time (JIT) inventory management; cost behavior analysis; balanced scorecard in performance evaluation and economic value added

- IAC 438 Principle of Procurements 3(3-0-6)**  
Procurement policies and strategies; importance of procurement; just-in-time purchasing; e-procurement system; quality determination; ethics in procurement; the accountant's role in purchasing raw materials, fabricating materials and parts, finished goods and equipment; material planning and control; negotiation strategies
- IAC 464 Environmental Management Accounting 3(3-0-6)**  
*Prerequisite : IAC 352 Management Accounting*  
Sustainable development concepts; negative impacts of business activities on the environment and society; environmental management practices, correction, preparation and analysis of environmental cost information; benefits from environmental management in terms of monetary and non-monetary numbers; environmental management report for executives, and sustainability report for outside users under ISO schemes or related parties
- IAC 482 Seminar in Managerial Accounting 3(3-0-6)**  
*Prerequisite : IAC 352 Management Accounting*  
Roles of management accounting in the changing business environments; the conduct of accounting information for strategic purposes; the applications of cost accounting and the analysis of accounting information for management; special problems of management accounting and professional ethics
- IAC 419 Tax Planning 3(3-0-6)**  
*Prerequisite : IAC 353 Taxation II*  
Planning of personal income taxes, corporate income taxes, withholding tax, value-added tax and other taxes
- IAC 483 Seminar in Taxation 3(3-0-6)**  
*Prerequisite : IAC 353 Taxation II*  
Interesting taxation issues and the Central Tax Court's decision and judgments

- IAC 471 Accounting Research and Methodology 3(3-0-6)  
Principles, research methodology, and various types of research; basic knowledge of research; literature review related to accounting
- IAC 472 Statistics for Accounting Research 3(3-0-6)  
Prerequisite : IMA141 Introduction to Statistics  
Principles of statistics and fundamental concepts of statistics for accounting research, with focus on choosing statistic for data analysis and interpreting analysis results through computers
- IAC 473 Statistical Analysis in Accounting 3(3-0-6)  
*Prerequisite : IMA141 Introduction to Statistics*  
Probability concept, probability distribution of random variables, probability models in the study of accounting, sampling and estimation, testing the hypothesis, regression and correlation analysis, forecasting and time series
- IAC 474 Computer Usage for Accounting 3(1-4-4)  
*Prerequisite : IAC 151 Principles of Accounting I*  
ITE 111 Introduction to Information Systems  
Components of computer: hardware, software, and operation system; practice of office computer programs in accounting areas: Excel, Advanced Excel and Access

## Communication Arts Program (Comm Arts)

---

### Professional Foundation Courses

- ICO 111    **Communication Theories**    **3(3-0-6)**  
Development of communication theories, process, elements, supporting factors and obstacles to communication effectiveness in various areas; including consequences of communication: personal communication and mass communication to national development
- ICO 112    **Introduction to Mass Communication**    **3(3-0-6)**  
Meaning, characteristics, mission, importance, and history of mass media such as newspaper, magazine, motion picture, and broadcasting media covering media related activities such as advertising and public relations, morals and ethics
- ICO 113    **Speech for Communication**    **3(2-2-5)**  
The principles of effective speech and human thinking process. Analyze audiences and evaluate own speech. Prepare appropriate speech for various situations, especially for those related to Communication Arts such as moderator, announcer and persuasion
- ICO 116    **Language and Communication in Social and Cultural Context**    **3(2-2-5)**  
Basic understanding of language nature focusing on the effective reading and writing to accomplish the target of Communication in a social and cultural dimension relating to language and language usage; development of Thai reading and writing abilities in various situation; application of the knowledge to the study in communication arts
- ICO 222    **Ethic of Mass Communication**    **3(3-0-6)**  
Ethics of mass communication and case study to promote codes of conduct in the field; critical skills: analyzing, synthesizing, and applying to various ares of communication arts in rapid-changing social and economic conditions; solution to problems in the field
- ICO 212    **Information Technology for Communication**    **3(2-2-5)**  
Information technology development, roles and its importance in applying for communication; an essential computer application programs for various kinds of communications

- ICO 213 Mass Media and Dharmacratic Society 3(3-0-6)**  
 Roles, effects, and responsibility of various mass media relating to social, economic, and politic development following principles, truths, justice in order to form 'dha-macratic' society
- ICO 215 Digital Photography for Communication 3(2-2-5)**  
 Elements and functions of digital camera; various kinds of digital camera, lens, accessories; principles of taking pictures by using a digital camera, selecting picture files, setting picture resolution, applying saving-pictures file system, setting ISO balance, measuring light, and setting f-stop to balance with speed shutter; picture composition, light setting, various types of taking pictures, and editing pictures for communicative purposes
- ICO 218 Intercultural Communication in ASEAN 3(3-0-6)**  
 Definition, significance, and role of intercultural communication in ASEAN; influence or social attribution, culture, psychology, environment, new culture entrance, adjustment, proficiency of cultural diversity communication, comparison of Thai mass media and other Asian countries, code of ethic and problems in intercultural communication studies
- ICO311 Communication Research 3(3-0-6)**  
*Prerequisite: ICO 111 Communication Theories*  
*ICO 112 Introduction to Mass Communication*  
 The basic concept, principles of research methodology in social sciences, characteristics and types of researches, defining research problems, reviewing literature and develop research proposal for communication, research design, data collecting, data analysis and writing research report and referencing
- ICO 312 Communication in Thai Culture 3(3-0-6)**  
 Culture and structures of Thai society, values, personality, lifestyles, uniqueness of Thai from past to present, government culture, maintenance and development of Thai inheritance, emphasis on relations between communication and culture, including development of communications in Thai society resulting from changes in culture

**ICO 318    Communication in Current Affairs** **3(3-0-6)**  
 Theoretical analysis; concepts; and historic, politic, economic, and social contexts relating to and affecting various current situations in Thailand and abroad through mass media

### Required Professional Courses

---

**ICA 111    Introduction to Journalism** **3(2-2-5)**  
 Development of both domestic and international journalism, rights, freedom, roles, functions, and social responsibilities; knowledge and understanding about information including news and critiques; technology in journalism, organizational management, and ethics of journalists

**ICA 120    Introduction to Radio and Television** **3(3-0-6)**  
 History of radio and television both inside and outside Thailand radio and television system and technology development, roles, responsibility and influences on radio and television practitioner's society and ethics

**ICA 131    Principles of Public Relations** **3(3-0-6)**  
 A development and theory of public relations; procedure of public relations; group targeting and tools for public relations procedure for government and business enterprise; professional principles and ethics for public relations personnel

**ICA 132    Persuasive Communication** **3(3-0-6)**  
 Characteristics and techniques of effective persuasion using various media – both mass and interpersonal; important psychological, social and environmental elements affecting persuasive communication

**ICA 151    Principles of Advertising** **3(3-0-6)**  
 Advertising theories and concepts including methods, roles and the influence of advertising to society; creativity in advertising; advertising planning; analysis of the prod-



ucts; market and consumers media selection and evaluation; roles and responsibilities of agents; laws and ethics of advertising

**ICA 214 Information Gathering for Mass Communication 3(3-0-6)**

*Prerequisite : ICO 111 Communication Theories*

*ICO 112 Introduction to Mass Communication*

**ICA 217 Psychology of Communication 3(3-0-6)**

Principles and concepts of human communication, its nature and importance of perception and communication in certain ages; psychological condition, physical and social conditions which influence communications such as personality, needs, learning, and motivation

**ICA 251 Target Audience Behavior 3(3-0-6)**

*Prerequisite: ICO 111 Communication Theories*

*ICO 112 Introduction to Mass Communication*

Target audience behavior's lifestyles, perceptive behavior, and attitude changes, including decision making procedures for media planning and follow-up on results of advertising

**ICA 252 Principles of Marketing for Advertising 3(3-0-6)**

*Prerequisite: ICA 151 Principles of Advertising*

Meaning, scope, and importance of marketing; product classification and planning, product distribution; pricing strategies and promotion; target market analysis and selection; understanding market environment including market control

**ICA 314 Arts for Mass Communication 3(2-2-5)**

Meaning and formats of arts in both fine arts and contemporary arts as well as role and influences of arts on efficient productions of Mass Communication such as electronic media, print media, film, PR media, performing arts and IMC activities

**ICA 491     Communication Arts Professional Seminar     3(2-2-5)**

Development in problems analysis skills for communication arts; recommendation of action by exchanging ideas and experiences relating to communication arts from both government and private sector; applying theories and practices for communication arts professional area

**ICA 492     Senior Project     5(0-10-5)**

Senior project work on interesting topics or issues corresponding to the field of studies; thesis work supervised and evaluated by thesis committee

**ICA 493     Internship in Communication Arts     1(0-35-18)**

Part-time or full-time jobs in communication arts related field of students' academic curriculum for at least 280 hours, under the guidance of a Communication Arts faculty member

**ICA 494     Co-operative Education     6(0-35-18)**

Training in the institutions agencies affiliated to the co-operative education program, with an aim to provide students with experience and skills in actual work situation, self-improvement and how to live cooperatively with others in society; at least 560-hour internship performance and documents submitted have to pass the approval the agencies and the departmental committee

**Elective Professional Courses****ICA 220     Introduction to News Writing and Reporting     3(2-2-5)**

Meaning, news value and news issue analysis; organizing thinking and language usage in news writing according to news writing structure for newspaper; broadcasting; and other media; practicing news article writing in various kinds

**ICA 316     Mass Communication Business     3(3-0-6)**

Principles and techniques of administration; manage various kinds of mass

media such as newspaper, radio, motion pictures, and public relations; market analysis, investment; international mass communication business

**ICA 336 Presentation Techniques in Public Relations 3(2-2-5)**

*Prerequisite : ICO 113 Speech for Communication*

Principles and process of presenting public relations idea and creation; study techniques and strategies in presenting; use media for presentation effectively

**ICA 351 Media Planning 3(3-0-6)**

*Prerequisite: ICA 151 Principles of Advertising*

*ICA 252 Principles of Marketing for Advertising*

Media planning principles; media analysis and comparison; planning procedures for effective objectives; effective decision making on media selection including the media evaluation and correction

**ICA 354 Integrated Marketing Communication 3(3-0-6)**

*Prerequisite : ICA 151 Principles of Advertising*

Meaning, roles, and importance of marketing communication; characteristics and procedure of marketing communication; roles of product and brand, target audience behavior, marketing promotion; media planning and selection; tools of effective integrated marketing communication; evaluation of marketing communication plan

**ICA 361 Advertising Presentation 3(2-2-5)**

*Prerequisite: ICO 212 Information Technology for Communication)*

*ICO 215 Digital Photography for Communication*

*ICA 151 Principles of Advertising*

Principles and techniques of creative advertising presentation in various Formats; the preparation of information and materials; content and thinking analysis; analyzing clients' expectation; persuasive techniques to convey information to impress clients; selecting effective audio-visual equipments; technical terms in advertising including organizing portfolio for advertising practitioner

## Elective Concentrated Professional Courses

- Advertising

IAD 253 Creative and Copywriting 3(2-2-5)

*Prerequisite: ICA 151 Principles of Advertising*

Concept about advertising production procedure, strategies, creativity, information analysis for idea creation; scriptwriting for print media, outdoor media, broadcasting media, television, motion picture, internet and other supportive media; analysis of the comparison of copywriting and related surrounding factors

IAD 311 Creative Strategy for Advertising 3(2-2-5)

*Prerequisite: ICA 251 Target Audience Analysis*

Principles and production process; practice creative thinking in order to develop skills in creative thinking; apply creative thinking to a plan and suitable strategies for advertising; practical experience, project creation, field trip and case study

IAD 356 Advertising Design 3(2-2-5)

History and the fundamentals of advertising, roles within an advertising agency; the function of the advertising designer relative to this hierarchy; accurate communication of the advertiser's message through appropriate development of concepts, words and visuals which reflect strategy, positioning and brand personality

IAD 358 Photography for Advertising 3(2-2-5)

*Prerequisite : ICO 215 Digital Photography for Communication*

Principles of photographic production for advertising; process and techniques of photographing in various types such as indoor, outdoor, products, human figure; edit photos by using computer; evaluate picture quality for advertisement

IAD 359 Electronic Advertising Media Production 3(2-2-5)

*Prerequisite: ICO 212 Information Technology for Communication*

*ICO 215 Digital Photography for Communication*

Process and steps in advertisement production; practice producing electronic advertisement such as advertisement of radio and television broadcasting and other electronic media

**IAD 360 Brand Management 3(3-0-6)**

Meaning, roles, importance of “brand” in marketing; concept, theories, and strategies in brand building; process of brand communication using various kinds of communications through cases which both, fail and succeed; evaluating value of brand

**IAD 362 Creative Marketing Activities 3(3-0-6)**

*Prerequisite: ICA 151 Principles of Advertising*

*ICA 252 Principles of Marketing for Advertising*

Meaning, roles, importance of marketing activities; characteristics and process of holding activities; marketing situation and target audience analysis for planning and selecting creative activities, media, communication tools effectively; marketing activities evaluation

**IAD 432 Advertising Campaign 3(2-2-5)**

*Prerequisite: ICA 151 Principles of Advertising*

*ICA 252 Principles of Marketing for Advertising*

Practice of advertising campaigns; preparing advertising objectives conformed to marketing objectives; planning an effective advertising media; create advertising theme including the usage of an effective and efficient evaluation procedure

**IAD 451 Advertising Management 3(3-0-6)**

*Prerequisite: ICA 151 Principles of Advertising*

Administration system in advertising business such as advertising agency, advertising production company; their administration, service, roles of those who involve in advertising planning; budget and other resources allocation; coordinating with other advertising organizations effectively

- **Public Relations**

**IPR 231 Writing for Public Relations 3(2-2-5)**

*Prerequisite: ICO 115 Creative Writing for Mass Communication*

*ICA 131 Principles of Public Relations*

Principles and writing techniques for public relations for publicity through various media such as writing for printing, writing for broadcasting, speech writing, poster writing; various kinds of writing to communicating meaning effectively in public relations business

**IPR 232 Public Relations Media Production 3(2-2-5)**

*Prerequisite: ICO 215 Digital Photography for Communication*

*ICA 131 Principles of Public Relations*

Development of concept and principles in media production for complicated public relations; electronic media production and new media; project creation for public relations activities

**IPR 305 Organizational Communication 3(3-0-6)**

*Prerequisite: ICA 131 Principles of Public Relations*

Fundamentals, concepts, process, and elements of communication including interpersonal, small groups and organizational communication; types of communication such as upward and downward communication, formal and informal communication

**IPR 311 Creative Strategy for Public Relations 3(2-2-5)**

*Prerequisite: ICA 131 Principles of Public Relations*

Principles and procedure in creation; creative thinking skills; development of creative skills; design and application of creative thinking; public relations plan and suitable strategies; learning practicing through experiences, field, and case studies

**IPR 332 Public Relations Campaign 3(2-2-5)**

*Prerequisite: ICA 131 Principles of Public Relations*

*IPR 231 Writing for Public Relations*

Media usage for public relations program such as printed and electronic media; effective campaign planning, promotion and public relations activities to publicize information to target audiences effectively

**IPR 337 Photography for Public Relations 3(2-2-5)**

*Prerequisite: ICO 215 Digital Photography for Communication*

Principles, theories, and techniques of photographing used in public relations business; study layout; study taking pictures to use in news articles and features, human picture taking and light setting; practice taking pictures specially for public relations business

**IPR 362 Creative Public Relations Activities 3(2-2-5)**

*Prerequisite: ICA 131 Principles of Public Relations*

Meaning, roles and importance of activities used for public relations; characteristics and various kinds of activities; target audiences and situations analysis needed in public relations; creative activities planning; media and tools for effective integrated communication; evaluation of public relations activity plan

**IPR 433 Public Relations and Issue Management in Crisis Situation 3(3-0-6)**

*Prerequisite: ICA 131 Principles of Public Relations*

*IPR 332 Public Relations Campaign*

Meaning, creative thinking for problem solving and issue management in crisis situations happening to organizations using public relations principles; present crisis situations and problems solved; case studies, and discussion

**IPR 434 Public Relations Management 3(3-0-6)**

*Prerequisite: ICA 131 Principles of Public Relations*

Concept and techniques of public relations implementation in the view of public relations administrators; study strategies in public relations administrations; manage organization structure, personnel, budget, internal business; control and evaluate public relations administration

## • Journalism

- IJR 222 Interviewing Arts and Techniques** 3(2-2-5)  
*Prerequisite: ICO 113 Speech for Communication*  
 Arts of the interview, interviewing techniques, and preparation for interview; principles of phrasing the questions and audio techniques for maximum effect in communication arts
- IJR 223 Journalistic Writing** 3(2-2-5)  
*Prerequisite: ICO 115 Creative Writing for Mass Communication*  
 Principles, methods and practice in writing of editorials, articles and short features; evaluation of roles and responsibilities of writer and critics towards society
- IJR 245 Graphic Design for Journalism** 3(2-2-5)  
 Theories of arts and design, color principles, layout in print and online media; design and choose fonts, edit pictures, design layout; use computer for printing and designing and practice designing layout for print media
- IJR 331 Electronic Publishing** 3(2-2-5)  
*Prerequisite : IJR 223 Journalistic Writing*  
 Electronic publishing via internet technology; concepts and practices in page design; layout; scanning techniques; the usage of other effective computer program supporting electronic publishing
- IJR 345 Journalistic Photography** 3(2-2-5)  
*Prerequisite : ICO 215 Digital Photography for Communication*  
 Principles and techniques of photography for various kinds of print media; application of picture layout for illustrations of news articles, articles, features, cover, fashion and other columns; ethics of photographer; outdoor photography
- IJR 346 Editing for Journalism** 3(2-2-5)  
*Prerequisite: ICA 111 Introduction to Journalism*  
 Roles and relationship among editing, production, administration, news depart-



ments in newspaper, magazine, new media, radio, television business; prepare, select articles and illustrators; edit first draft; focusing on truth, language usage, presenting information

**IJR 347 Article and Critique Writing 3(2-2-5)**

*Prerequisite: ICO 115 Creative Writing for Mass Communication*

Principles of writing for various kinds of media; writing skills for various kinds of articles such as descriptive article, analytical articles, interview article including standard and reliable critiques

**IJR 348 Feature Writing 3(2-2-5)**

*Prerequisite: ICO 115 Creative Writing for Mass Communication*

Techniques in writing features for various kinds of media, collecting and editing interesting facts; practicing creative writing; creative writing in knowledge and idea

**IJR 450 Editing and Newspaper Production 3(2-2-5)**

*Prerequisite: ICA 111 Introduction to Journalism*

News business management, collecting, selecting, editing news articles, features, columns and illustrations; proofing, designing, arranging layout for newspaper; practicing newspaper production in every step.

**IJR 453 Editing and Magazine Production 3(2-2-5)**

*Prerequisite: ICA 111 Introduction to Journalism*

News business management, collecting, selecting, editing news articles, features, columns and illustrations; proofing, designing, arranging layout for magazines.

## International Business Program (IB)

---

### Professional Foundation Courses

- IAC 100 Principles of Financial Accounting 3(3-0-6)**  
Nature and concepts of accounting; the usefulness of accounting information; the balance sheet, the income statement and the cash flow statements; the accounting cycle and accounting model; recording of accounting for trading and manufacturing business; analysis of financial statements.
- IAC 103 Principles of Managerial Accounting 3(3-0-6)**  
Managerial accounting concepts; costs classification; cost-volume-profit analysis; cost ratio; standard costs and variance analysis; budgeting; costs analysis for decision making and operation evaluation.
- IEC 211 Principles of Microeconomics 3(3-0-6)**  
How resources are allocated through market mechanism, consumer behaviors and utilities, behavior of firms, cost and profit. The course also deals with price determination in product and factor markets and efficiency of resource use, structure of different types of market and roles of government.
- IEC 212 Principles of Macroeconomics 3(3-0-6)**  
National income and its components, determination of national income, employment and level of price, roles of government, money, and external factors affecting national income determination. The course also includes economic policies to alleviate inflation and unemployment.
- IEG 350 English for Professional Development 3(2-2-5)**  
English language for effective communication. The course will thoroughly cover a review of English grammar for the correct usage of English language and emphasis to be made on regular practices to improve and develop skills in academic reading, listening, writing, and presentation which are essential and critical to job prospects and a student's career advancement.

**IFN 201 Business Finance 3(3-0-6)**

Importance and goal of financial management, forms of businesses and businesses taxes and their importance to financial management, principles of financial analysis and planning, capital allocation, procurement of short-term, intermediate, and long-term capital, project analysis, capital structure, cost of capital and the dividend policy.

**IHR 201 Human Resource Management 3(3-0-6)**

History, theories, principles, scopes and processes of human resource management including human resource planning, job analysis, recruitment and selection, performance appraisal, wage and salary management, compensation, training and development, welfare and fringe benefits, social security, compensation fund, providence fund, government's pensions fund, maintenance of human resources, disciplines, termination and labor relations.

**ILA 112 Business Law 3(3-0-6)**

Characteristics and objectives of important business forms including partnership, companies, and public companies. The course also deals with increase and reduction of capital, debentures, dissolution, amalgamation, bankruptcy, business revival, roles of private financial institutions and stock markets; important laws concerning business organizations such as business negotiation and contract drafting, settlement of business disputes and arbitration, trade competition, industrial laws, consumer protection, laws of international trade and economic unions, Asian trade and cooperation law, and future trends of international agreements.

**IMG 201 Modern Management and Organization Behavior 3(3-0-6)**

Organization and process of management including planning, organizing, leading, and controlling. The course also includes organizational behaviors such as leadership, motivation, communication, managing groups, team building, managing changes and organizational culture.

**IMK 201 Principles of Marketing 3(3-0-6)**

Definition, concept and roles of marketing and its importance to economy, marketing environment, market segmentation, market targeting, product positioning, consumer behaviors, marketing management and marketing information system, product classification, product mix, pricing policy and strategy, physical distribution planning, promotion.

**IPO 201      Operations Management      3(3-0-6)**

Introduction to management of production functions including the selection of the plant location, the factory layout and design, the analysis of work system, quality control and inventory.

**IPO 200      Quantitative Analysis and Business Statistics      3(3-0-6)**

The role of quantitative theory model applying in business, linear programming model, transportation model, decision making model, queuing model, the role of statistics in business decision making, differentiate between qualitative and quantitative variables, describing data, probability concepts and continuous probability, hypothesis testing, statistical test, apply business research and descriptive statistics in making better business decisions.

**Required Major Courses**

---

**IBM 301      International Business Management      3(3-0-6)**

Effect of environmental factors on multinational business operation, similarities and difference in terms of culture, legal, political and social systems as well as economic order.

**IBM 333      International Trade      3(3-0-6)**

Problems of international economic interdependence with special attention given to trade, protectionism, trade policy for developing countries, international investment, the balance of marketing activities between countries in the international environment.

**IBM 334      International Business Logistics      3(3-0-6)**

Transportation process, marine, road, rail, cargo, air, pipeline, liners, charter, terms of condition, duties and responsibility of carrier and shipper, insurance, contract and transportation's document, multi-model transport and freight forwarder.

**IBM 431      Export-Import Management      3(3-0-6)**

Practical, technical and procedural aspects of export and import business operation, INCOTERMS, documentation and process including credit, transportation, insurance, communication relation to export and import.

**IBM 445 Cross Cultural Management 3(3-0-6)**

Development of knowledge and skills needs to manage effectively and work with people from other cultures, developing awareness of the pervasive and hidden influence of culture on behavior, particularly with respect to management and management practices, developing familiarity with the type of the situations and issues which managers often confront when working internationally, and developing an appreciation of the impact on personal behavior of living and working in another culture.

**IBM 460 Global Competitive Strategy 3(3-0-6)**

Importance of business strategies in moving a company in the intended direction; to analyze industry conditions and competitive pressures; to identify, develop, and sustain the company competitive advantages, understand different levels of strategy namely corporate, business, and function; most importantly, to thoroughly discuss strategic management process from strategy formulation, strategy implementation, and assessment.

**IBM 492 Current Issues in International Business 3(3-0-6)**

Differing business topics and geographic emphasis as the world's activities change as the situation dictates.

**IFN 331 International Finance 3(3-0-6)**

International Business Finance, Factors essential to Financial Management of International Business, fund raising through International Financial Markets, impact of Balance of balance of payments and exchange rate fluctuation over International Business operation.

**ILA 431 International Trade Law 3(3-0-6)**

Essential international trade agreements, GATT, agreement on textile, public health, trade barriers, ICC practice and reference international trade role of international law.

**IMG 336 Leadership, Negotiation and Conflict Management 3(3-0-6)**

Theories and factors regarding leader designation, administrative methods, human relationships, negotiation, conflict resolving, the leader's influence on group behavior and decision-making, the success and failure of the group, type of leadership, and the leader's adjustment to suit given situations.

**IMK 331 International Marketing 3(3-0-6)**

To analyze increasing competitive international environment; to thoroughly discuss marketing decisions before entering foreign markets; to identify and compare targeted country attractiveness with others; to understand pros and cons of each mode entry, the interactions among the diverse elements of the marketing mix when applied to foreign markets.

**IPO 302 Research Methodology 3(3-0-6)**

Introduction to research as a scientific investigation, research proposal, research process from getting and developing a research idea, defining the problem statement, identifying variables, research designs, sampling, methods of collecting data, formulating and testing hypotheses, using software program such as SPSS in data analyzing and processing, interpreting results and writing and presenting reports, emphasis made on business problems and ethical conduct both in the treatment of research subjects and in the conduct of research and reporting research results.

**IBM 494 Co-operative Education 6(0-35-18)**

Students must do the internship in the area of International Business in a selected organization like an employee of that organization for at least 16 consecutive weeks or 560 hours. Each student is assigned a particular task to complete within the 16 weeks. Diary records must be done and submitted every 2 weeks to the advisor. Students are also evaluated by the supervisor of the organization.

**IBM 498 Internship 3(0-35-18)**

Part-time or full-time jobs in International Business related field of students' academic curriculum for at least 280 hours, under the guidance of a International Business faculty member.

## Elective Major Courses

---

- IAM 375      Social and Cultural Diversity in Asia      3(3-0-6)**  
Culture and its role in Asian way of life, spatial organisation, ritual, family, inequality, construction of individual identities and social solidarities, symbolism, belief, kinship, gender and class; case studies to be drawn from different countries in Asia.
- IAM 420      China, India and Japan in Global Business Perspective      3(3-0-6)**  
Chinese, Indian, and Japanese business operations in global business perspective; and Chinese, Indian, and Japanese values and perceptions towards the world as well as the political and economic roles of overseas Chinese, Indian, and Japanese in Developed countries, East Asia countries, and Southeast Asia Countries.
- IBM 221      International Experience I      3(1-35-20)**  
Abroad program to be organized by Rangsit University. The course is aimed for students to have an international exposure and to broaden their perspective of the world by taking a trip abroad and take a course in their area or related area of study for not less than 45 hours during their stay. The assessment will be done by both the host institution and Rangsit University.
- IBM 322      International Experience II      3(1-35-20)**  
An extension of IBM 221 International Experience I. Class to be organized by Rangsit University. A different 45 hour class from that of IBM 221 is required and a different destination is preferable. The assessment will be conducted by the host institution and Rangsit University International College.
- IBM 450      International Commerce: ASEAN      3(3-0-6)**  
How business is run in ASEAN; analyzing the country demography, culture, political system, economy, trading relationship, law and regulation, and case discussion.
- IBM 454      E – Commerce for International Trade      3(3-0-6)**  
Content and process of E – Commerce for International Trade. Information system development, E – Commerce, software package for International Trade E – Commerce, electronic

transfer money, transfer database, data security in International Trade E – Commerce, also case study for critical issue of International Trade E – Commerce.

**IFN 431 International Financial Markets and Institutions**

**3(3-0-6)**

Financial institution and money market structures, their principles and scope of operations, money market, capital market, and government securities market, their operational problems and policy.

**IMB 326 Online Marketing and Social Media**

**3(3-0-6)**

Value of online marketing, resources and customer database management and customer communication through online and social media tools that can be used in marketing activities, marketing planning stages for online and social media activities, concept of virtual store for marketing products and services including the future of online marketing resources.

**IMK 432 Strategic Brand Management**

**3(3-0-6)**

Concept of brand and brand management as an asset of business, important of brand management, identify and establishing brand positioning and values, planning and implementing brand marketing programs, measuring and interpreting brand performance and growing and sustaining brand equity.

**IMK 433 Strategic Customer Relationship**

**3(3-0-6)**

Conceptual framework of customer relationship management, technological tools for customer relationship management, implementing customer relationship management, relationship management in business to business commerce, relationship marketing strategies and customer perceived service quality, customer relationship in services including case study of customer relationship management practices.

**IMK 451 Marketing Management**

**3(3-0-6)**

Concept and practice from marketer attitude, marketing planning , product planning, pricing policies, distribution, promotion, marketing research, marketing policy toward duties and responsibility of business to economic and social.



## Information and Communication Technology Program (ICT)

### Professional Foundation Courses

#### **MAT 153 Mathematics for Information Technology 3(3-0-6)**

Random variables and probability distributions; mathematical expectation; discrete and continuous probability distribution; functions of random variables; estimation; tests of hypothesis; linear regression and correlation; non-parametric statistics; Boolean algebra and logic circuits; algebra of sets and strings; groups and subgroups; data-types relating to algebraic structures; relations and functions; recursive functions; mathematical models for finite-state machines.

#### **ICT 111 Introduction to Information Technology 3(3-0-6)**

Introduction of information technology; history of IT; pervasive themes in IT: digital logic, memory, storage, processing paradigms, operating systems, programming languages; introduction to telecommunications and computer networks: internet, intranets, and extranets; IT and its related and informing disciplines application domains: business information systems, electronic commerce, decision support systems, knowledge management; ethical issues in information society.

#### **ICT 112 Fundamental Information Systems 3(3-0-6)**

Fundamental of information systems; business organizations and processes; business environments; information systems in organization; persons related to information systems; type of information systems; systems and application software; organizing data and information; introduction to systems development: systems development life cycle (SDLC), system deployment; integration of IT into business, government and community systems; role of IT professionals in solving organizational problems.

### Required Major Courses

#### **ITE 201 Information Technology Engagement in Community 3(3-0-6)**

Promoting a common view of engagement; leading change; commitment to community responsibility; create information technology knowledge to community; effective relationship with community and university; and engagement sustainable lifelong learning.

**ICT 210 Information Technology Laws 3(3-0-6)**

Legal issues in information technology, intellectual property: copyright, patents, and trade secrecy, transborder data flow, privacy, libel, crime, constitutional rights, information policy of government sector, business sector, and non-profit organization, ethics in information tasks.

**ICT 211 Databases 3(3-0-6)**

Information management concepts and fundamentals; data organization architecture; concepts of database system; database management system; database normalization, data modeling; database query language: data description languages, data manipulation languages; managing database environment; database backup, data security and data integrity; special-purpose database.

**ICT 302 Social and Professional Issues 3(3-0-6)**

Professional communications; teamwork concepts and issues; service management; social context of computing; intellectual property; legal issues in computing; organizational context; professional and ethics issues, responsibilities; history of computing; privacy and civil liberty.

**ICT 402 Bachelor of Science Research Skills 3(3-0-6)**

Full research process: evaluation of a question or problem of interest; develop an appropriate research design to acquire relevant data; choose an appropriate method of analysis; reasoned conclusion about the original question or problem of interest; Basic skills to undertake independent research.

**ICT 213 System Analysis and Design 3(3-0-6)****Prerequisite: ICT 211 Databases**

System components; system development life cycle (SDLC); requirement analysis; technical and operational feasibility studies; data flow diagram, entity relationship diagram, computer-aided software engineering (CASE) tools; transition from analysis to design: input design, output design; prototyping, system development, testing, implementation; documentation and presentation.

- ICT 214      Computing Platform Technology      3(3-0-6)**  
Introduction to computer architecture and operating systems; hardware components and functions; processor, bus, external devices connector, memory, storage; service of operating systems; process, multiprogramming; time sharing system; management of computer resources; synchronization; concurrency; deadlock; starvation; job scheduling; advanced virtual memory organization; parallel processing.
- ICT 301      Implementation of Information Systems      3(2-2-5)**  
Information system implementation; implementation process; architecture; acquisition and sourcing; intersystem communications; data mapping and exchange; integrative coding; scripting techniques; software security practices; miscellaneous issues; overview of programming languages.
- ICT 303      Systems Administration and Maintenance      3(3-0-6)**  
Fundamental of systems administrative and maintenance; administrative activities: user accounting; printing service; storage allocation; monitoring and troubleshooting; administration and maintenance of applications, operating systems and networks; administrative domains: IT system documentation, policies, procedures, education and support of the users of systems.
- ICT 304      Information Assurance and Security      3(3-0-6)**  
Fundamental aspects of information assurance and security; security mechanisms; operational issues; policy; attacks; security domains; forensics; information states; security services; threat analysis model; vulnerabilities.
- ICT 305      Information Systems Project Management      3(3-0-6)**  
Necessary factors for managing software development projects; technical and behavioral aspects of project management; managing the system development life cycle; requirement determination; term of references (TOR); logical design; physical design; testing and implementation; system and database integration; metrics for project management; system performance evaluation; managing expectations of supervisors, users, and working groups; determining skill requirements of the project staffs; managing system for project staffs; cost-effectiveness analysis; acquisition and sourcing; reporting and presentation techniques.

- ICT 401 Seminar in Information and Communication Technology 3(3-0-6)**  
Team working; meeting; conferencing; argumentation; methods of writing report; project writing; project presentation; seminar evaluation, activities concerning current information technology.
- ICT 101 Object-Oriented Technology 3(3-0-6)**  
Fundamental concepts of object-oriented technology; characteristics of objects; class and objects; object attributes and behaviors; base classes; inheritance; arrays; reuse of objects; basic concepts of object-oriented analysis and design using UML.
- ICT 102 Computer Programming I 3(2-2-5)**  
Basic concepts of computer programming; skills necessary to develop modern application; features of a typical modern programming environment; techniques in developing applications; object orientation and visual programming; basic features of programming language; emphasis on the use of practical examples to illustrate key aspects.
- ICT 202 Computer Programming II 3(2-2-5)**  
**Prerequisite:** ICT 102 Computer Programming I  
Fundamental of the commercial programming environment; features of commercial batch and online processing systems; practical use of programming languages to implement a large number of existing online commercial systems; exploring a number of fundamental business online processing tasks and the used algorithms.
- ICT 212 Data Structure and Algorithm 3(3-0-6)**  
*Prerequisite: ICT 102 Computer Programming I*  
Introduction to data structures and algorithms; string; array; record; pointer; linked list; list data structure; stack data structure; queue data structure; graph data structure; tree data structure; recursion; searching algorithms; sorting algorithms and analysis of algorithms.
- ICT 215 Human-Computer Interaction 3(3-0-6)**  
Human factors; Human-computer interaction (HCI) aspects of application domains; human-centered evaluation; developing effective interfaces; accessibility; emerging technologies; human-centered software development; technological opportunities in the design of interactive systems; process of designing user interfaces; evaluation of user interface designs.

- ICT 110 Web Systems and Technologies 3(2-2-5)**  
Structure of World Wide Web; web design concepts and techniques; practical steps to plan, organize, create, and maintain a web site from start to finish; digital media; web development using markup language such as HTML, XHTML, XML; vulnerabilities.
- ICT 209 Data Communications and Networking 3(3-0-6)**  
**Prerequisite:** ICT 111 Introduction to Information Technology  
Foundations of networking; in-depth knowledge of data communications and networking theory; concepts and requirements relative to telecommunications and networking technologies; structures; hardware and software; types of computer networks; layers of control; network mechanism; routing and switching; physical layer; lab of networking design; security; network management; build and maintain a Local Area Network (LAN).
- ICT 493 Internship 1(0-6-3)**  
Students will enter an industrial training program with the industrial sector, the business sector, or other public organizations for a period of at least 280 hours. Student is required to do the report.
- ICT 494 Introduction to Senior Project 2(2-0-4)**  
**Prerequisite:** Have earned at least 45 credits of required major courses or consent of Head of Program  
Creation of senior project topics; outlining and drafting senior projects; citations and reference formats; writing introduction for senior projects; compilation of theories; frameworks and existed works and/or related researches; writing for senior project methodologies; development and presentation of models and/or tools used in senior projects; preliminary examination of senior project proposals.
- ICT 495 Senior Project 3(0-6-3)**  
**Prerequisite:** Have earned ICT 494 Introduction to Senior Project and/or Have earned at least 50 credits of required major courses or consent of Head of Program  
Completion of senior projects; printing standard for full senior projects; preparation for final examination of senior projects; final examination of senior projects.

**ICT 498 Co-operative Education 6(0-35-18)**

Prerequisite: Have earned at least 60 credits of major courses or consent of Head of Program

Minimum of 16 weeks or 560 hours must be achieved. This program is designed to enhance traditional academic study by providing students the opportunity to integrate academic study and classroom theory with productive and real-life work experience in Information and Communication Technology field at a work site in the community. It also provides the time to explore occupational areas and to develop skills, knowledge and attitudes needed to become productive and satisfied members of society.

**Elective Major Courses**

---

**ICT 320 Animation and Multimedia Technology 3(3-0-6)**

Current practices in information retrieval; key concepts in storyboarding, scene composition; lighting and sound track generation; key framing; motion capture; simulation techniques; algorithms to control the motion of articulated limbs; skeleton-muscle-skin models; facial animation; representation and animation of surface detail.

**ICT 323 Electronic Commerce 3(3-0-6)**

Introduction to electronic commerce and mobile commerce; Infrastructure and web based tools for electronic and mobile commerce; Electronic and mobile commerce business models; Security issues, and electronic payment systems; Strategies for marketing, sales, purchasing, and promotion; Legal and ethics issues underlying electronic and mobile commerce.

**ICT 324 Data Warehouse and Data Mining 3(3-0-6)**

Introduction to data warehouse: characteristics of data warehouse, drawbacks and benefits of data warehouse, architecture of data warehouse, internal data structure for data warehouse, data integration, creating high quality data, data mart, online analytical processing; introduction to data mining: types of data for mining, architecture of typical data mining system, data preprocessing, association rule mining, classification and prediction, clustering, mining complex data, data mining applications, current trends in data mining, text mining, web mining, including tools for data mining analysis such as WEKA, SAS, etc.

**ICT 325      Internet Systems Programming      3(2-2-5)**

Technologies for the internet; practical experience in programming web (HTTP) servers and clients; creating XML documents and implementing associated XML software; programming SOAP and Web Services; building database web front-ends.

**ICT 327      Business Intelligence Application Development      3(2-2-5)**

Business Intelligence (BI) concepts; requirements for Business Intelligence; advantage and disadvantage of Business Intelligence; architecture of Business Intelligence, Business Intelligence methodology; design of advanced corporate reporting of Business Intelligence(BI); Web Intelligence, Desktop Intelligence for BI software such as Business Objects, Cognos , Oracle , SQL server; studying Balanced Scorecard and Key Performance Indicators.

**ICT 328      Social Media Management      3(3-0-6)**

Social facts; social computing; social media; fundamental of management; social web; social graph; social text; social business; social media strategy; social media in marketing; social media in innovation; social media in customer service; social media in knowledge management and human resource management; social media in public sector and business; social media engagement; social media analytics; crisis management.

**ICT 329      Big Data Analytics      3(3-0-6)**

Basic concepts of big data analytics; application in social network analysis; big data analytics platform; social network analytics; MapReduce programming; MapReduce based computing framework, general algorithms for data analytics, trend and outbreak detection from social network streams; practical sessions dedicated to the implementation of big data analytics with selected programming language and tools.

**ICT 331      Cloud Computing      3(3-0-6)**

Introduction to cloud computing; cloud architecture and service models; the economics and benefits of cloud computing; horizontal and vertical scaling; thin client; multiprocessor and virtualization; distributed storage; security and federation: presence, identity and privacy in cloud computing; public cloud; community cloud; hybrid cloud; private cloud; software as a service; platform as a service; technologies in cloud; programming in cloud; applying cloud computing in various domains.

- ICT 333 Enterprise Architectures 3(3-0-6)**  
Foundation of enterprise architectures; define operating model; implement the operating model via enterprise architecture; enterprise architecture maturity; build the project at a time; use enterprise architectures to guide outsourcing.
- ICT 334 Object-Oriented Database Implementation and Management 3(3-0-6)**  
Object-oriented database and management; object-relational database; stability of database; database administration; working with other databases; development and application of object data programming using object-oriented programming languages such as C++, JAVA or O2.
- ICT 335 Network Design and Implementation 3(3-0-6)**  
Introduction to networking; time-division multiplexing; fiber-optic technologies; wavelength-division multiplexing; SONET architectures; SDH architectures; packet ring technologies; multiservice SONET and SDH platforms; network case study.
- ICT 336 Introduction to Machine Learning 3(3-0-6)**  
Introduction to machine learning; supervised learning; Bayesian decision theory, parametric methods; multivariate methods; reduction; clustering; nonparametric methods; decision trees; kernel machines; combining multiple learners.
- ICT 337 Image Processing 3(3-0-6)**  
Introduction to image processing; image transformations; statistical description of images; image enhancement; image restoration; image segmentation and edge detection; image processing for multispectral images.
- ICT 338 Intelligent Systems 3(3-0-6)**  
Introduction to artificial intelligence and applications; introduction to game AI; rule based expert systems; neural computing; fuzzy logic; genetic algorithms, intelligent agents, state machines and methods of evaluating these technologies.
- ICT 339 Computer Forensics 3(3-0-6)**  
Introduction to computer forensics, tracking on offender, encryption and forensics, data hiding, hostile code, electronic toolkit, investigating computers and host, introduction to the criminal justice system.



**ICT 421      Wireless Network      3(3-0-6)**

Concepts of wireless data network and modern knowledge of wireless implementation, emerging technologies such as wireless phone systems, mobile internet system, wireless local loop (WLL), satellite system, Bluetooth, etc., Wireless Local Area Network(WLAN) technologies, IEEE802.11 standard, wireless LAN topologies, major WLAN equipment: wireless NIC, access points, wireless bridges and antenna systems, WLAN security systems, the design, planning, implementation, operation and troubleshooting of WLAN.

**ICT 422      Games Design and Programming      3(3-0-6)**

Electronic games design and programming; the design and implementation of games engines; history of game design artificial intelligence and media creation for different genres of games; motion generation; behavioral control for autonomous characters; interaction structure; and social and interface issues of multi-user play.

**ICT 424      Computer Graphics      3(3-0-6)**

Hardware and software principles of interactive raster graphics; introduction to the basic concepts; 2-D and 3-D modeling and transformations; viewing transformations; projections; rendering techniques; graphical software packages and graphics systems; practical use of a standard computer graphics API to reinforce; concepts and fundamental computer graphics algorithms.

**ICT 425      Mobile Applications Implementation      3(2-2-5)**

Web application development on mobile devices; development process; underlying technology: mobile communications, embedded visual tools, and mobile development frameworks.

**ICT 426      Search Engine and Retrieval Systems)      3(3-0-6)**

Models and methods for storage and retrieval of information; topics include information retrieval techniques, text analysis and automatic indexing, document clustering, search techniques, search engine architecture, techniques for ranking search results, retrieval performance measurement, and current research topics related to search engine; image retrieval and multimedia retrieval.

**ICT 428 Computer Vision and Augmented Reality 3(3-0-6)**

Computer Vision technology; introduction of Augmented Reality; filtering; image representations; texture models; color vision; multi-view geometry; projective reconstruction; Bayesian vision; statistical classifiers; clustering & segmentation; voting methods; tracking and density propagation; visual surveillance and activity monitoring; medical imaging; image databases; and image-based rendering; recent Augmented Reality applications.

**ICT 429 Management of Information Technology Services 3(3-0-6)**

Organization structure; organizational communication; budgeting issues; personnel hiring; evaluation and promotion; physical plant layout; controls and procedures for routine daily operation; security and disaster planning; improves the adjustment from the academic to the business environment.

**ICT 489 Special Topics in Information and Communication Technology 3(3-0-6)**

Special topics in Information and Communication Technology areas, from semester to semester with change of content, topics must be approved by department head.

**IEG 350 English for Professional Development 3(2-2-5)**

English language for effective communication. The course will thoroughly cover a review of English grammar for the correct usage of English language and emphasis to be made on regular practices to improve and develop skills in academic reading, listening, writing, and presentation which are essential and critical to job prospects and a student's career advancement.

**IBM 221 International Experience I 3(1-35-20)**

Overseas program to be organized by Rangsit University. The course is aimed for students to have an international exposure and to broaden their perspective of the world by taking a trip abroad and take a course in their area or related area of study for not less than 45 hours during their stay. The assessment will be done by both the host institution and Rangsit University.

**IBM 322 International Experience II 3(1-35-20)**

Extension of IBM 221 International Experience I. Class to be organized by Rangsit University. A different 45 hour class from that of IBM 221 is required and a different destination is preferable. The assessment will be conducted by the host institution and Rangsit University.

## International Political Economy and Development Program (IPE)

---

### Professional Foundation Courses

- IPE 101 Introduction to Southeast Asian Political Economy and Culture** 3(3-0-6)  
Basic knowledges of Southeast Asian countries in the area of politics, economics, and culture, information on ASEAN nations namely Brunei Darussalam, Kingdom of Cambodia, Republic of Indonesia, Lao People's Democratic Republic, Malaysia, Republic of the Union of Myanmar, Republic of the Philippines, Republic of Singapore, and Socialist Republic of Vietnam. their development and involvement in global political economy. first hand experience in ASEAN country(ies).
- IPE 211 Principles of Microeconomics** 3(3-0-6)  
How resources are allocated through market mechanism, consumer behaviors and utilities, behavior of firms, cost and profit. The course also deals with price determination in product and factor markets and efficiency of resource use, structure of different types of market and roles of government.
- IPE 212 Principles of Macroeconomics** 3(3-0-6)  
National income and its components, determination of national income, employment and level of price, roles of government, money, and external factors affecting national income determination. The course also includes economic policies to alleviate inflation and unemployment.
- IPE 231 Introduction to Politics** 3(3-0-6)  
General idea of politics and the development of political science;, meanings and aims of state, political ideas and doctrines, political institution and processes, power/authority and allocation of values, politics in the other forms.
- IPE 232 International Relations** 3(3-0-6)  
Issues and theories in international relations: the nature of world politics, theories of international relations and diplomacy, elements of the world system and the main actors in world politics. The course also discuss the ends and the means of foreign policy as conducted by

states in international relations: intervention, alliances, economics integration and interdependence, neutrality, isolation and non-alignment.

**IPE 233      Public Policy Analysis      3(3-0-6)**

Concepts of policy analysis, the role of the government and the analysis of decision making of civil servants, models of public policy analysis, public policy making process; policy implementation and evaluation.

**IPE 234      Comparative Political Systems      3(3-0-6)**

Ideologies, theories, political analysis, democratic system, authoritarian system, concepts of power, political institutions, the structure of modern politics, political process, elections, campaigns, political communication, political participation, political development in comparative approaches.

**IPE 235      International Development      3(3-0-6)**

Development theories and practice from an interdisciplinary perspective, overview of the history of development co-operation in the past 50 years, the main concepts and ideas on development, principal features of the theories underlying past and present approaches to international development, roles of different actors including international organizations, national government and civil society organizations of development co-operation.

**IPE 236      Political Philosophy      3(3-0-6)**

Political philosophy, political ideologies, political theory, Marxist approach, Mannheim's 'Utopia', Freud's 'Necessary Illusion', Lyotard's 'postmodernism', Anderson's 'Imagined Community', Miller's 'National Identity', Kymlicka's 'Multiculturalism', Rosseau's 'The Social Contract', Locke's 'Two Treatises of Government', Burke's 'Conservatism', Kropotkin's 'Libertarian', Social Darwinism, liberation theology.

**IPE 251      Modern Management and Organization Behavior      3(3-0-6)**

The organization and process of management including planning, organizing, leading, and controlling. The course also includes organizational behaviors such as leadership, motivation, communication, managing groups, team building, managing changes and organizational culture.

**IPE 252 World History 3(3-0-6)**

The history and culture of the contemporary world, some of the important political, economic, social, intellectual, cultural and religious changes, the world circumstances that have shaped the development of recent world civilization.

**IPE 302 Research Methods 3(3-0-6)**

Research, hypothesis testing by using parameters and not using parameters, such as, chi-square, deviation analysis, regression analysis, correlation, time series, using software program such as SPSS. Study the relationship between models, information systems and business decisions. The practical application of behavioral and statistical methods for the purpose of obtaining and analyzing relevant business information will also be examined.

**IPE 351 English for Professional Development 3(3-0-6)**

English language for effective communication. The course will thoroughly cover a review of English grammar for the correct usage of English language and emphasis to be made on regular practices to improve and develop skills in academic reading, listening, writing, and presentation which are essential and critical to job prospects and a student's career advancement in Philosophy, Politics and Economic or International Relations and Development.

### Required Major Courses

---

**IPE 201 Political Economy in South East Asia 3(3-0-6)**

Approaches to the study of political economy in Southeast Asia: modernization theory to dependency and Marxist Theory, Colonialism and liberalism, cold war and post-cold war regional effect, regional integration, ethnic problems, political economy of the boom and bust period, political structures and Chinese entrepreneurship.

**IPE 241 Thai Government and Politics 3(3-0-6)**

Modern Thai politics and government from 1932 to present; Thai democratic regime: constitution, people, the king, the national assembly, the cabinet, the courts, local government, and civil society; the future of Thai politics.

- IPE 253 Elements of Philosophy I 3(3-0-6)**  
History of the Asian countries from their initial settlement of the region and their development; Asian society beginning with the ancient civilization; the emphasis made on their progressive involvement in the global political economy.
- IPE 254 Elements of Philosophy II 3(3-0-6)**  
A critical study and analysis of modern western philosophy. Philosophical thought from Descartes, Kant, Hume, Hobbes, Locke, and neo-Thomists and the influence of these currents on modern political and ethical problems. Similarities and dissimilarities to Taoism, Confucianism and Buddhism.
- IPE 301 Globalization and International Economy 3(3-0-6)**  
The introductory overview of Globalization and International Economy. Theories, history, and issues in International Economy will be explored. The fundamental tradition of economics only recognizes the role of national government, which is often referred in the case of market failure, but International Economy also recognizes the role foreign governments and international institutions play in the economy. A solid background of socio-political structure and context of international economic relations. Emphasis will be placed on major issues including the political economy of international trade, economic reform, multinational corporations in the global economy, the international monetary system, as well as the consequences and controversies of globalization.
- IPE 306 Development Economics 3(3-0-6)**  
Key issues of Global Economic Development in the 21st century. The relevant theoretical definitions, principles and historical context of economic development, concepts and trends with a global perspective. Economic and social problems faced by developing countries and possible policy recommendations.
- IPE 307 International Organizations and Economic Integration 3(3-0-6)**  
Roles of international organizations such as United Nations, International Monetary Fund, World Bank, World Trade Organization, and International Court of Justice. Major concepts explaining the origins and dynamics of international organizations; comparing different kinds of international organizations; limitations, impacts, and future trends of international organizations in

world politics including international economic political and legal organizations Economic integration and the comparison between different regional integration.

**IPE 315 International Trade Theories and Policies 3(3-0-6)**

Essential international trade agreements, GATT, agreement on textile, public health, trade barriers, ICC practice and reference international trade role.

**IPE 316 Economics of Public Sector 3(3-0-6)**

The existence of governments and the effect of economic activity. The way governments can deal with the failure of markets to achieve efficient outcomes. Public expenditures and taxation. The use of private finance initiatives and public-private partnerships for school education, hospitals and other public services and reforms of social security benefits.

**IPE 401 (Current Issues in International Political Economy and Development) 3(3-0-6)**

Application of practical analysis to a number of international relations debates. The course will be organized around case studies. The case studies will be chosen to highlight and extend fundamental international relations concepts while also providing skills in organizing and examining data.

**IPE 402 Thai Business and Politics 3(3-0-6)**

The development of business leaders, groups, conglomerates, organizations and association in Thailand with a focus on the patterns of relations to Thai politics and changes in political/power relations. The relationship between constitutions and topology of political regime particularly the democratic form.

**IPE 495 (Co-operative Education) 6(0-35-18)**

Students must do the internship in the area of International Political Economy and Development in a selected organization like an employee of that organization for at least 16 consecutive weeks or 560 hours. Each student is assigned a particular task to complete within the 16 weeks. Diary records must be done and submitted every 2 weeks to the advisor. Students are also evaluated by the supervisor of the organization.

**IPE 496 Internship in International Political Economy and Development 1(0-35-18)**

Part-time or full time-time jobs in International Political Economy and Development

related field of students' academic curriculum for at least 200 hours, under the guidance of a International Political Economy and Development

**IPE 499 Senior Project 5(0-10-5)**  
Methodology, steps in conducting a research, research planning, problem setting, assumption setting and test of assumption, data collection, data analysis, and presentation.

### **Philosophy, Politics and Economics (PPE)**

**IPE 201 Political Economy in South East Asia 3(3-0-6)**  
Approaches to the study of political economy in Southeast Asia: modernization theory to dependency and Marxist Theory, Colonialism and liberalism, cold war and post-cold war regional effect, regional integration, ethnic problems, political economy of the boom and bust period, political structures and Chinese entrepreneurship.

**IPE 238 International Politics 3(3-0-6)**  
The history, major issues and theories in contemporary world politics. An overview of various approaches, such as Realism, Liberalism and Reflectivist theories. Globalization and the changing nature of the modern state, integration, international law, ethics, and the role of international organizations.

**IPE 257 Asian History 3(3-0-6)**  
History of the Asian countries from their initial settlement of the region and their development; Asian society beginning with the ancient civilization; the emphasis made on their progressive involvement in the global political economy.

**IPE 301 Globalization and International Economy 3(3-0-6)**  
The introductory overview of Globalization and International Economy. Theories, history, and issues in International Economy will be explored. The fundamental tradition of economics only recognizes the role of national government, which is often referred in the case of market failure, but International Economy also recognizes the role foreign governments and international institutions play in the economy. A solid background of socio-political structure and context of international economic





- IPE 401**      **Current Issues in International Political Economy and Development**      **3(3-0-6)**  
Application of practical analysis to a number of international Political Economy and Development debates. The course will be organized around case studies. The case studies will be chosen to highlight and extend fundamental international Political Economy and Development concepts while also providing skills in organizing and examining data.
- IPE 402**      **Thai Business and Politics**      **3(3-0-6)**  
The development of business leaders, groups, conglomerates, organizations and association in Thailand with a focus on the patterns of relations to Thai politics and changes in political/power relations. The relationship between constitutions and topology of political regime particularly the democratic form.
- IPE 431**      **(Organization Development)**      **3(3-0-6)**  
Methods for systematically changing and developing organization to be most efficient and effective. Organization change and organization structure, process of organization development including data collection and analysis; problem solving, process of change; change management; and techniques for improving organization for better operation.
- IPE 495**      **(Co-operative Education)**      **6(0-35-18)**  
Students must do the internship in the area of International Political Economy and Development in a selected organization like an employee of that organization for at least 16 consecutive weeks or 560 hours. Each student is assigned a particular task to complete within the 16 weeks. Diary records must be done and submitted every 2 weeks to the advisor. Students are also evaluated by the supervisor of the organization.
- IPE 496**      **(Internship in International Political Economy and Development)**      **1(0-35-18)**  
Part-time or full time-time jobs in International Political Economy and Development related field of students' academic curriculum for at least 200 hours, under the guidance of a International Political Economy and Development
- IPE 499**      **Senior Project**      **5(0-10-5)**  
Methodology, steps in conducting a research, research planning, problem setting, assumption setting and test of assumption, data collection, data analysis, and presentation.

## Elective Major Courses

---

- IPE 237 Interest and Pressure Groups 3(3-0-6)**  
 Interest and pressure groups as a main part of political interactions, processes and life of political man/woman : definition, scope, size, membership, political aims, strategies, tactics, tactics, the evolution of roles and functions of such groups in politics of politics of some selective countries.
- IPE 240 Theories of Democracy 3(3-0-6)**  
 Idea and theory involving democracy, critics from Marxist and corporatist, liberalism and democratic society, and problem of democracy in terms of theoretically and physically.
- IPE 255 Philosophy of History 3(3-0-6)**  
 The meaning of historical explanation; the concept of progress; pattern, and law in history; historical determinism and its critics.
- IPE 256 Critical Thinking 3(3-0-6)**  
 Acquire reasonable, reflective, responsible, and skillful thinking that is focused on deciding what to believe or do. A person who thinks critically can ask appropriate questions, gather relevant information, efficiently and creatively sort through this information, reason logically from this information, and come to reliable and trustworthy conclusions about the world that enable one to live and act successfully in it.
- IPE 261 International Experience in International Political Economy and Development I 3(1-35-20)**  
 Study, Abroad program to be organized by College of Government. The course is aimed for students to have an international exposure and to broaden their perspective of the world by taking a trip abroad for not less than 45 hours during their stay.
- IPE 307 International Organizations and Economic Integration 3(3-0-6)**  
 Roles of international organizations such as United Nations, International Monetary Fund, World Bank, World Trade Organization, and International Court of Justice. Major concepts

explaining the origins and dynamics of international organizations; comparing different kinds of international organizations; limitations, impacts, and future trends of international organizations in world politics including international economic political and legal organizations Economic integration and the comparison between different regional integration.

**IPE 311 Intermediate Microeconomics 3(3-0-6)**

Consumption theory through indifference curve analysis, consumption behavior over time; theory of production in various markets, analysis of factor markets, role of government in market oriented economy, general equilibrium analysis and principles of welfare economics.

**IPE 312 Intermediate Macroeconomics 3(3-0-6)**

Analysis of the relationship between product, money, capital and factor markets in determining income, employment and price level under closed and open economy, effects of fiscal and monetary policies on macroeconomics variables under classical, Keynesian, Neo Classical and Neo Keynesian assumptions, Economic stabilization and growth

**IPE 317 Economics of Monetary and Banking 3(3-0-6)**

Roles of money, bank, financial institutions, reserve bank toward economic environment, interest rate indication, commercial bank systems, capital market, bond, structure of financial market towards monetary and economic system, market structure.

**IPE 318 (China: Economy and Trade in 21st Century) 3(3-0-6)**

The rise and growth of China's economy and trade over recent decades and examines factors affecting such growth. The course also highlights China's relations with major countries and encourages students to think critically the role of China in the global trade arena in 21st century.

**IPE 352 (Globalization and Religion) 3(3-0-6)**

How religion has become an influential force in contemporary global politics, especially after the fall of Communism and the rise of globalization.

**IPE 353 Chinese Philosophy 3(3-0-6)**

Philosophical teaching of major Chinese thinkers : Confucius, Mencius, Las Tzu, Chuang Tzu, Mo Tzu, Hsun Tzu ; contemporary Chinese philosophers.

**IPE 354 Buddhist Philosophy and Democracy 3(3-0-6)**

The Four Noble Truths ; three signs of Being; the dependent origination; karma and rebirth; nirvana; application of the teaching of Buddhism to political issues especially principles and essential characteristic features and implementation of democracy.

**IPE 355 Social Justice and Responsibilities 3(3-0-6)**

Concept of Social justice in the philosophical aspect and an important issue in politics, religion, and civil society. Concepts of human rights and equality. Movement towards a socially just world. Responsibilities of an entity whether it is government, corporation an individual to the society.

**IPE 361 International Experience in International Political Economy and Development II 3(1-35-20)**

An extension of IPE 261 International Experience in International Political Economy and Development I. Class to be organized by College of Government. A different 45 hours class from that of IPE 261 is required and a different destination is preferable.

**IPE 411 International Monetary Economics 3(3-0-6)**

Critical economic thinking skills as applied to the topics of banking and financial markets. Basic economic principles such as supply and demand, the concept of equilibrium, the theory of asset demand, and profit maximization are applied to study the role of money in the economy and the institutional characteristics of the banking system and financial markets.

**International Relations (IRD)****IPE 238 International Politics 3(3-0-6)**

The history, major issues and theories in contemporary world politics. An overview of various approaches, such as Realism, Liberalism and Reflectivist theories. Globalization and the changing nature of the modern state, integration, international law, ethics, and the role of international organizations.

**IPE 239 Comparative Public Policy 3(3-0-6)**

Methods, theories, and platform for Comparative Public Policy, Compare Public Policy of Thailand with other developing and developed country. Analysis important problems of administrative problems from other countries, effect from politics, legal system, culture, and economy.

- IPE 242 Urban and Rural Development 3(3-0-6)**  
 The measurement of poverty, inequality and social exclusion, monetary approach, capabilities approach, inequality approach, urban development, town planning, rural development, local empowerment, education development, and progressive process.
- IPE 261 International Experience in International Political Economy and Development I 3(1-35-20)**  
 Study, Abroad program to be organized by College of Government. The course is aimed for students to have an international exposure and to broaden their perspective of the world by taking a trip abroad for not less than 45 hours during their stay.
- IPE 331 ASEAN Integration 3(3-0-6)**  
 An overview of the most important aspects of Southeast Asian integration. A brief historical survey of the origins of the Association of Southeast Asian Nations (ASEAN). The institutional system of the ASEAN. An analysis of the ASEAN policy process and the impact of those policies. Recent developments and future developments of ASEAN, notably economic, foreign, and security policies.
- IPE 336 Resource Aspects in International Relations and Development 3(3-0-6)**  
 Resources and conflict, politics of oil, politics of water, food security, forestry, geopolitics, mineral resources, biotechnology.
- IPE 337 Comparative Politics: South East Asia 3(3-0-6)**  
 Political Economy of Southeast Asia, democracy, communism, junta, ethnic, religions, civil society, decentralization, political reform, Asian values, and ASEAN.
- IPE 338 Regionalism and Globalization in East Asia 3(3-0-6)**  
 Northeast Asia, regional security, security challenge, nationalism, Communist party and Chinese politics, the rise of China, Japan's external relations, Japanese parties and social structure, South Korean political economy, security issues from North Korea, Taiwan politics and economics, One country two systems in Hong Kong and Macao.
- IPE 339 Government and Politics in the United States of America 3(3-0-6)**  
 American political parties, elections, political participation, US president, congress,

senate, adjudication, interest groups, bureaucracy, federalism, local politics, constitution, foreign and defence policy, media and American culture.

**IPE 340 Political Parties and Electoral Systems 3(3-0-6)**

Political parties, ideological party, strategic party, tactical party, catch-all party, caucus, third party, single policy party, electoral system, first past the post, gerrymandering, electoral college, block vote, single non-transferable vote, single transferable vote, alternative vote, supplementary system, mixed member systems, and proportional systems.

**IPE 341 International Public Policy 3(3-0-6)**

A systematic overview of how public policies operate in world affairs. Case studies of how public policy is made across the borders are examined for further understanding. Essential skills for the analytical study of world politics and for the development of a normative assessment of the main issues currently facing international policy makers. The focus is on human security issues.

**IPE 342 Europe Union and Political Integration 3(3-0-6)**

European Union, European Institutions, EU and its citizenship, single market, treaties, European commission, council, parliament, court of justice, Eurozone, Common Agriculture policy, Common Foreign and Security Policy, Enlargement of European Union.

**IPE 343 (Contemporary Politics of the Commonwealth) 3(3-0-6)**

Commonwealth history, ANZAC and independent of Commonwealth nations, the politics and economics of the United Kingdoms, New Politics in Scotland, the political development and foreign policies of Australia, Canada politics and the case study of Quebec, political reform and foreign policies of New Zealand, Apartheid and contemporary South Africa, issues of diversity, equality, and citizenship.

**IPE 344 Special Topics in International Development 3(3-0-6)**

Case Studies in International Development, The study of issues, ideologies, wisdom in International Development

**IPE 361 International Experience in International Political Economy and Development II** 3(1-35-20)

An extension of IPE 261 International Experience in International Political Economy and Development I. Class to be organized by College of Government. A different 45 hours class from that of IPE 261 is required and a different destination is preferable.

**IPE 432 Non Democratic Regimes** 3(3-0-6)

Nature and character of authoritarian regimes, personal rules, military rule, one party rule, religious fundamentalism, semi-democracy, disguised dictatorship.

**IPE 433 Comparative Politics: South Asia and the Middle East** 3(3-0-6)

An overview of international and domestic politics in South Africa and Middle East focusing on the development of state power, regional relations, conflicts and relations with the West, politics of oil, and economic processes.

## Minors Courses

### For non - IPED students

**IPE 101 Introduction to Southeast Asian Political Economy and Culture** 3(3-0-6)

Basic knowledges of Southeast Asian countries in the area of politics, economics, and culture, information on ASEAN nations namely Brunei Darussalam, Kingdom of Cambodia, Republic of Indonesia, Lao People's Democratic Republic, Malaysia, Republic of the Union of Myanmar, Republic of the Philippines, Republic of Singapore, and Socialist Republic of Vietnam. their development and involvement in global political economy. first hand experience in ASEAN country(ies).

**IPE 201 Political Economy in South East Asia** 3(3-0-6)

Approaches to the study of political economy in Southeast Asia: modernization theory to dependency and Marxist Theory, Colonialism and liberalism, cold war and post-cold war regional effect, regional integration, ethnic problems, political economy of the boom and bust period, political structures and Chinese entrepreneurship.



- IPE 232 International Relations 3(3-0-6)**  
Issues and theories in international relations: the nature of world politics, theories of international relations and diplomacy, elements of the world system and the main actors in world politics. The course also discuss the ends and the means of foreign policy as conducted by states in international relations: intervention, alliances, economics integration and interdependence, neutrality, isolation and non-alignment.
- IPE 235 International Development 3(3-0-6)**  
Development theories and practice from an interdisciplinary perspective, overview of the history of development co-operation in the past 50 years, the main concepts and ideas on development, principal features of the theories underlying past and present approaches to international development, roles of different actors including international organizations, national government and civil society organizations of development co-operation.
- IPE 239 Comparative Public Policy 3(3-0-6)**  
Methods, theories, and platform for Comparative Public Policy, Compare Public Policy of Thailand with other developing and developed country. Analysis important problems of administrative problems from other countries, effect from politics, legal system, culture, and economy.
- IPE 240 Theories of Democracy 3(3-0-6)**  
Idea and theory involving democracy, critics from Marxist and corporatist, liberalism and democratic society, and problem of democracy in terms of theoretically and physically.
- IPE 241 Thai Government and Politics 3(3-0-6)**  
Modern Thai politics and government from 1932 to present; Thai democratic regime: constitution, people, the king, the national assembly, the cabinet, the courts, local government, and civil society; the future of Thai politics.
- IPE 301 Globalization and International Economy 3(3-0-6)**  
The introductory overview of Globalization and International Economy. Theories, history, and issues in International Economy will be explored. The fundamental tradition of economics only recognizes the role of national government, which is often referred in the case of market failure, but International Economy also recognizes the role foreign governments and international institutions play

in the economy. A solid background of socio-political structure and context of international economic relations. Emphasis will be placed on major issues including the political economy of international trade, economic reform, multinational corporations in the global economy, the international monetary system, as well as the consequences and controversies of globalization.

**IPE 306      Development Economics      3(3-0-6)**

Key issues of Global Economic Development in the 21st century. The relevant theoretical definitions, principles and historical context of economic development, concepts and trends with a global perspective. Economic and social problems faced by developing countries and possible policy recommendations.

**IPE 315      International Trade Theories and Policies      3(3-0-6)**

Essential international trade agreements, GATT, agreement on textile, public health, trade barriers, ICC practice and reference international trade role.

**IPE 316      Economics of Public Sector      3(3-0-6)**

The existence of governments and the effect of economic activity. The way governments can deal with the failure of markets to achieve efficient outcomes. Public expenditures and taxation. The use of private finance initiatives and public-private partnerships for school education, hospitals and other public services and reforms of social security benefits.

**IPE 334      Foreign Policy Analysis      3(3-0-6)**

The policy-making process of foreign policies. Theoretical models and frameworks of policy analysis will be introduced in order to examine how states formulate and implement their foreign policies. The impact of policy-makers, political leaders, bureaucrats, interest groups, and the public that have on foreign policies. In addition to providing theoretical models, this course will also focus on a series of policy-oriented case studies. Students are encouraged to apply these theoretical models and frameworks in an analysis of case studies drawn from the field of foreign economic policy and international trade as well as international politics.

**IPE 335      (International Peace and Security)      3(3-0-6)**

Theoretical dimensions and a range of approaches and issues in the field of security studies. The course examines some of the security issues including interstate warfare, alliance



## Hospitality Industry (IHI)

---

### Professional Foundation Courses

**IHI 101 International Tourism and Hospitality 3(3-0-6)**

Evolution of international tourism and hospitality, factors affecting tourism, motivation for tourism, the components of tourism industry, planning and development of tourism, impacts of tourism on economy, society, environment and culture.

**IHI 102 Psychology for Hospitality and Cross Cultural Communication 3(3-0-6)**

Concepts and processes of social behavior of individuals including cognition, motivation, values in working and leisure, and applications of such concepts on hospitality works, development of awareness and skills in communicating with service recipients, colleagues, trade partners from different cultural backgrounds which result to different meaning assignment to words, symbols and customs in order to nurture effective communication, establish mutual understanding without conflicts and finally to be able to render services that well satisfy customers' needs.

**IHI 103 Hospitality Arts and Personality Development 3(3-0-6)**

The discussion of and the elaboration on the concept of personality in regards to its importance and methods of personality development for students, both internal and external personalities, to be in line with the standard of international hospitality industry, concepts related to hospitality arts for welcoming travelers, tourists, and service customers according to international standards including verbal communication, gestures, personality, and service delivery methods.

**IHI 104 Sustainable Hospitality Industry Management 3(1-4-4)**

Meaning, conceptual development and principles of sustainable tourism as well as its components by focusing on principles and operation of different kinds of tourism that adopted sustainable tourism principle for sustainable economic and social interests of receptive destinations such as ecotourism, cultural tourism, and community based tourism. Learners gain empirical experience of sustainable tourism through participation of field experiences.

**IHI 105      Tourist Behavior      3(3-0-6)**

Cognition process and behaviour tourists and travelers for different purposes including destination choice, destination image, attitude, learning, beliefs, and other determining factors: motivation, culture, situational factors, and tourist typology. Learners self learn and apply theoretical frameworks through mini research projection the assigned topic.

**IHI 301      Human Resource Management in Hospitality Industry      3(3-0-6)**

The human resource management function with an emphasis on issue related to hospitality industry, the personnel function in recruitment, selection, training and development, performance appraisal and labor relations including attitude development and moral of people working together, practice of human relation skills for supervising, motivating and counseling employees and analysis of individual leadership skills, case studies for solving human resources problems.

**IHI 302      Hospitality Industry Information Systems      3(2-2-5)**

Characteristic of hospitality industry information systems, study of the types of information, the organization, collection, storage and analysis of data through various methods System Security on Hospitality Industry by using internet, how to make usage of data in problem solving, decision making and hotel and tourism planning through computer application.

**IHI 401      Ethics and Laws Related to Hospitality Industry      3(3-0-6)**

Concepts of professionalism, ethics as well as civil and commercial laws concerning hospitality industry in regards to tourists and service customers' safety, regulations regarding environments, custom, quarantine, and immigration procedures as well as law enforcement for tourists.

### Required Major Courses

---

**IHI 210      Special Interest Tourism      3(3-0-6)**

Meaning and characteristic of special interes tourism including educational tourism, art and culture tourism, creative tourism, ethnic tourism, adventure tourism, sport and health tourism, tourism activities for homosexual tourists, medical tourism by discussing market trends, opportunities, success factors, and marketing limitations of these special interest tourism.





**IHI 411      Preparation for internship in Hospitality Industry      1(0-2-1)**

Understanding grounding, realization of importance of internship with hospitality industry enterprises, conformity to rules and regulations, work disciplines and etiquettes, personality development, the use of office appliances, preparation of business correspondences, preparation for job application as well as professional presentation techniques; development of English proficiency for job application in tourism and hospitality industry through practical activities.

**IHI 412      Strategic Management and Current Issues in Hospitality Industry      3(3-0-6)**

A discussion of strategic management and current issues in hospitality industry themselves as well as political, economic and social issues at both national and international levels that affect hospitality industry, current issues by applying the content learnt from other courses in analyzing and asserting opinions, prominent figures of tourism and hospitality industries, researching relevant information from credible sources and professionally present such information and suggestions.

**IHI 414      Co-operative Education      6(0-35-18)**

The internship in the area of hospitality industry and tourism management in a selected organization like an employee of that organization not less than 16 weeks or 4 months consecutively and complete particular assign tasks and organization task; records must be done and submitted on a weekly basis the advisor by students, students are also evaluated by the supervisor of the organization.



## Elective Major Courses

---

### Elective Language

Choose 5 courses from one of 3 groups below:

#### Chinese Language

**ILC 111 Chinese I** 3(2-2-5)  
Mandarin Sound systems; everyday vocabulary, and simple phrases, practice in conversational skills and proper pronunciation, three hundred common Chinese characters.

**ILC 112 Chinese II** 3(2-2-5)  
Practice in Chinese skills, conversation on familiar topics, four hundred additional Chinese characters, development of conversational skills and vocabulary build-up; improving reading skills through short passages.

**ILC 113 Business Chinese** 3(2-2-5)  
Practice in daily-life conversation such as greeting, shopping, telephoning, telling time, etc., Chinese culture and tradition, through selected illustrative readings in Chinese.

**ILC 114 Chinese for Office Personnel** 3(2-2-5)  
The characteristics of work and manner of personnel working in Chinese organization; focusing on the study of vocabulary and idioms necessary for office work.

**ILC 115 Chinese for Hospitality Industry** 3(2-2-5)  
Vocabulary and expression used in hospitality industry; basic information of hotel and restaurant management and travel services necessary for tourists.

#### Japanese Language

---

**ILJ 111 Japanese I** 3(2-2-5)  
Basic Japanese phonics; practice of the audio lingual reading and writing skills in Hiragana, Katakana and Kanji; a study of basic sentence structures used in greetings commonly focused in everyday life; the development of 500 vocabulary items and 50 Kanji characters.

- ILJ 112 Japanese II** 3(2-2-5)  
Basic sentence structures and practice of four skills: listening, speaking, reading and writing used in various situations; further learning of 500 vocabulary items and 100 Kanji characters.
- ILJ 113 Business Japanese** 3(2-2-5)  
The language structure; practice of four skills: listening, speaking, reading and writing used in situations assigned; further learning of 500 vocabulary items and 150 Kanji characters, the basic principles of reading; drill in Japanese reading using short passages about Japan, practice listening and speaking in every day life's conversation.
- ILJ 114 Japanese for Office Personnel** 3(2-2-5)  
The characteristics of work and manner of personnel working in Japanese organization; focusing on the study of vocabulary and idioms necessary for office work.
- ILJ 115 Japanese for Hospitality Industry** 3(2-2-5)  
Vocabulary and expression used in hospitality industry; basic information of hotel and restaurant management and travel services necessary for tourists.

## Thai Language

---

- ITA 111 Thai I** 3(2-2-5)  
Thai pronunciation and basic sentence structures, emphasizing on communicative listening, speaking, reading, and writing in everyday situations: greeting, leave taking, introductions, telephone conversation, asking and answering about directions.
- ITA 112 Thai II** 3(2-2-5)  
Further study of Thai vocabulary, pronunciation and basic sentence structures, emphasizing on communicative listening, speaking, reading, and writing in everyday situations: buying and selling things, job interviewing, and giving opinions.
- ITA 113 Business Thai** 3(2-2-5)  
The Thai language through various aspects of Thai social and cultural contexts: culture and customs of Thai, history, economy, and lifestyles, with an emphasis on listening, speaking, reading and writing in different situations.

ITA 114      **Thai for Office Personnel**      3(2-2-5)

The characteristics of work and manner of personnel working in Thai organization; focusing on the study of vocabulary and idioms necessary for office work.

ITA 115      **Thai for Hospitality Industry**      3(2-2-5)

Vocabulary and expression used in hospitality industry; basic information of hotel and restaurant management and travel services necessary for tourists.

## Elective

---

Choose 5 courses below:

IHI 221      **International Experience I**      3(3-0-6)

Abroad program to be organized by Rangsit University, aimed for students to have an international exposure and to broaden their perspective of the world by taking a trip abroad and take a course in their area or related area of study for not less than 45 hours during their stay, the assessment done by both the host institution and Rangsit University.

IHT 322      **International Experience II**      3(3-0-6)

An extension of IBM 221 International Experience I. Class to be organized by Rangsit University, preferable a different 45 hour class from that of IBM 221 is required and a different destination, the assessment conducted by the host institution and Rangsit University International College.

IHI 331      **Multimedia for Hospitality Industry**      3(3-0-6)

Multimedia and information technology system; problems in information technology and multimedia design and its impact on the system within organization; planning stage, structure arrangement, development; evaluation of IT and multimedia; IT and multimedia affecting online business include hospitality trading through mobile business; web design and development to obtain appropriate connection.

**IHI 341      Soft Adventure Tourism      3(3-0-6)**

Exploration of soft adventure tourism market and their characteristics; consumer behavior and expectation; potential sites and selection criteria, considerations about comfort, cost, environment factors, space layout, potential hazards, vehicle and people accessibility; prevention and removal of hazards, risk and emergency management during the trip; arrangement of recreational and sport activities suitable for the site, interpretative the site and activities by constructively engage locals and attribute cultural and local meaning of the site and activities to participants, manage the catering in the campsite, dismantling of campsite and waste management; preparation, adjustment, and implementation of soft-adventure tourism programs.

**IHI 342      Medical and Wellness Tourism      3(3-0-6)**

Concept, characteristics, origin and expansion of medical and wellness tourism; medical and wellness tourism destination; behavior and decision process, information search and expectation of medical and wellness tourists; major wellness tourism activities namely spa, life coaching, meditation, pilgrimage; management and marketing of medical and wellness tourism business, promotional policies of this type of tourism of major destination compare with Thailand.

**IHI 343      Creative Community-Based Tourism      3(3-0-6)**

Concept of destination community, destination branding for small cities and community development through tourism and hospitality. The community models and tourism experience like “handmade” experience, authentic and versatile “subculture” to attract new generation tourists. The theory and examples to explain a supportive business environment namely “integrated tourism system” and how to design such a system as it is a key to the success of a destination community and can be use to develop in urban as well as rural settings for truly sustainable community. The vision of the future growth of building a destination community to be creative community-based tourism.

**IHI 344      Tourism for Elderly and Disable      3(3-0-6)**

Understanding of the concept of disability, impairment, and aging and their implications on people’s physical, attitudinal, and information accessibility; characteristics and roles of disabled and senior tourism markets; classification of disability and their expected service experiences; the concept and importance of tourism and leisure in lives of disabled and senior citizens, policies that promote quality of life of disabled and senior citizens of different origin

market, service techniques and tour conducting technique for people with different types of accessibility problems.

**IHI 351 Bar and Beverage Management 3(2-2-5)**

Organizational Structure of the beverage department, operations of bar, types of bar, preparation for pre-opening and closing the bar, maintenance of the equipment, atmosphere and bar arrangement, layout of service stations, and hygiene enforcements, planning of shifts, personality grooming and hygiene, personnel supervision, bar management and control, law and regulations and management of responsible service of alcohol, stock control. Service procedures, daily report sales, handling guests' complaints. Practice of cocktail mixes, mock tail, coffee, chocolate beverages and the like.

**IHI 371 In-flight Passenger Service Management 3(2-2-5)**

System, equipments and their utilization; flight catering processes and collaboration with concerned parties in meal planning; type of food and meal served on different routes; responsible function for pre-flight meal preparation.

**IHI 383 Special Event Operation Principles 3(3-0-6)**

Concepts and issues relevant to event operation management by applying managerial skills and service skills together to respond to different situations including experience design, operation preparation for static and mobile events, risk management, crowd management and control, supporting logistics, and relevant legal regulations and processes.

**IHI 431 Advertising and Sales Promotion in Hospitality Industry 3(3-0-6)**

The role of the Advertising and Sales Promotion in Hospitality Business, its organization, functions and management: method of sales and promotion with regard to product analysis, advertising and personal selling; areas of sales and promotion including group sales, conventions, food, beverage and entertainment, special events and promotions: communication strategies, public relations, marketing strategies and planning, Advertising and Sales Promotion in Hospitality Business.

**IHI 451 Resort and Spa Management 3(3-0-6)**

Categories and roles of venue on the success of Resort and Spa Management. The course covers various concepts namely venue and facility design, sales and marketing, safety and

security, evaluation of the event, ethical issues, corporate social responsibilities, resort marketing and finance, problems and challenges more includes, as well as trends and challenges facing the future of venue business for Resort and Spa Management.

**IHI 461 Thai Culinary Arts Theory and Practice 3(2-2-5)**

Basic skills and procedure involve in Thai food production, the method of preparation, cooking and presentation, the characteristics of Thai food, major ingredient and how to plan a typical menu for different ethnic cuisines common in Thailand.

**IHI 462 International Culinary Arts Theory and Practice 3(2-2-5)**

Basic skills and procedure involve in International food production, the method of preparation, cooking and presentation, the characteristics of International food, major ingredient and how to plan a typical menu for different ethnic cuisines.

**IHI 472 Passenger Ground-service Handling and Management 3(2-2-5)**

Ground operation of an airline and airport; detailed work processes for customer care and services in accordance with load control and weight balance, necessary documentations and coordination of flight dispatch.

**IHI 484 Meeting, Convention, and Conference Organization 3(2-2-5)**

Meanings and importance of meeting, conference, and convention on national tourism and economic as well as various concepts that concern the operation management including planning, stakeholders, site selection, bidding process, program planning, budget, food and beverage services, site management, opening and closure ceremonies, and special events.

## Civil Engineering Program

### Basic Specialized

#### Basic Mathematics and Science Courses

**MAT 136 Engineering Mathematics I 3(3-0-6)**

Mathematical induction; vector algebra in three dimensions; functions; limits of functions; continuity; derivatives and slope of curve; maximum /minimum value and its applications; indeterminate form; integration and its applications; techniques of integration. 60

**MAT 137 Engineering Mathematics II 3(3-0-6)**

Prerequisite: MAT 136 Engineering Mathematics I

Real-valued functions of several variables and its applications; partial derivatives; chain rule and its applications; differential and integration of vector-valued functions of a real variable and its applications; analytic geometry of three dimensions, lines, planes and surfaces; polar coordinates; double and triple integration; introduction to line-integrals; sequences and series.

**MAT 138 Engineering Mathematics III 3(3-0-6)**

Prerequisite: MAT 137 Engineering Mathematics II

Maclaurin and Taylor series; Fourier series; introduction to system of linear equations; improper integrals; Laplace transforms; introduction to differential equations and its applications; numerical of differentiation and integration; approximation by straight line; regression and correlation.

**CHM 121 Principles of Chemistry 3(3-0-6)**

Stoichiometry and basis of the atomic theory and structure, properties of gas, liquid, solid and solution, chemical equilibrium, ionic and acid-base equilibrium, chemical kinetic, electronic structures of atoms, chemical bonds, periodic properties, representative elements, nonmetal and transition metals and electrochemistry.

**CHM 122 Laboratory for Principles of Chemistry 1(0-3-2)**

Prerequisite: CHM 121 Principles of Chemistry

Reactions and analysis of cation and anion, properties and preparation of gas, determine of mo-

molecular weight depression of freezing point of solution, chemical kinetic, chemical equilibrium, oxidation-reduction, pH and buffer solution, titration, and equilibrium changes of physical and chemical properties of substance.

**PHY 121    Physics I    3(3-0-6)**

Fundamental physical quantities and SI units; dimensions and dimensional analysis; measurements and errors; vector algebra; kinematics and kinetics of particles; energy and work; momentum; systems of particles; rigid bodies; elementary statics; elasticity; harmonic motion; fluid mechanics; heat and thermodynamics; emphasis of the course is on development of key physical concepts and skills in analyzing and solving standard problems in physics.

**PHY 122    Physics Laboratory I    1(0-3-2)**

*Prerequisite: PHY 121 Physics I*

Laboratory works about measurement and error analysis, translational and rotational kinetics, translational and rotational dynamics, oscillation, statics, fluid, heat, and thermodynamics.

**PHY 223    Physics II    3(3-0-6)**

*Prerequisite: PHY 121 Physics I*

Electrostatics; Electric charges; Coulombs law; electric field; electric flux; Gauss law; electric potential energy; electric potential; electric potential difference; capacitor; capacitance; dielectric; current electricity; direct current; conductors and insulators; direct current circuit; RC circuit; magnetic force; electromagnetic induction; magnetic material; hysteresis; R- L circuit; L-C circuit and R-L-C circuit; generators; AC circuit containing R, L and C; transformer; electromagnetic waves; semi-conductors; diodes and transistors; mechanical waves; sound; geometrical and physical optics; optical equipment and modern physics; emphasis of course is on development of key physical concepts and skill in analyzing and solving standard problems in physics.

**PHY 224    Physics Laboratory II    1(0-3-2)**

*Prerequisite: PHY 223 Physics II*

Laboratory works about electrostatics, direct current circuit, electromagnetism, alternating current, introductory electronics, waves, sound and optics, Photoelectric effects and radioactivity.



## Basic Engineering Courses

---

- GEN 133 Engineering Drawing 3(2-3-6)**  
Lettering; orthographic projection; orthographic drawings and pictorial drawing; dimensioning and tolerancing; section, auxiliary views and development; freehand sketching, detail and assembly drawings; basic computer aided drawings.
- GEN 192 Workshop Practice 2(0-6-3)**  
Principles of operation and handling of machine tools for manufacture, use of manufacturing equipment, work discipline and safety considerations in workplace, basic practical training including drilling, fitting and machining, welding, piping, sheet metal forming and electrical workshop practice.
- CEN 221 Engineering Statics 3(3-0-6)**  
*Prerequisite: PHY 121 Physics I*  
Method of solving engineering problem using fundamental mechanical principles, resultant and resolution of forces, moment of forces and couples, systems of forces and moments, equilibrium of particles and rigid bodies, structural analysis, forces in beams, friction, centroids and centers of mass, moment of inertia of an area, principle of virtual work and stability.
- CEN 223 Strength of Materials 3(3-0-6)**  
*Prerequisite: CEN 221 Engineering Statics*  
Forces and stresses; stresses and strains relationship; stresses in beams; shear force and bending moment diagrams; deflection of beams; torsion; buckling of columns; Mohr's circle and combined stresses; failure criterion.
- CEN 283 Engineering Surveying 3(2-3-6)**  
Introduction to surveying, theory of measurements and errors in surveying, linear measurements and scales, basic principles in leveling, precise leveling and applications, principles and applications of theodolites, traversing, determination of plane coordinate system, topographic survey, map plotting, area and volume computations.

**CEN 292 Applied Mathematics for Civil Engineering 3(3-0-6)**

*Prerequisite: MAT 138 Engineering Mathematics III*

Linear algebra; introduction to the theory of approximations; solution of algebraic and transcendental equations; solutions of linear systems; first and second order differential equations; Fourier transforms and Laplace transforms; vector calculus.

**CEN 342 Hydraulics 3(3-0-6)**

*Prerequisite: CEN 221 Engineering Statics*

Properties of fluids, fluid statics, kinematics of fluid flow, continuity equation, energy equation in a steady flow, momentum and dynamic forces in fluid flow, similitude and dimensional analysis, flow of incompressible fluid in pipes, open channel flow, fluid measurements, unsteady flow problem.

**MEN 222 Engineering Dynamics 3(3-0-6)**

*Prerequisite: CEN 221 Engineering Statics*

Kinematics and kinetics of particles and rigid bodies; Newton's second law of motion, force, mass and acceleration; work and energy; impulse and momentum.

**IEN 221 Probability and Statistics for Engineers 3(3-0-6)**

Probability theory; conditional probability; probability distributions of discrete and continuous random-variables; normal and Poisson distributions; inferential statistics relating to sampling, hypothesis testing and parameter estimation; analysis of variance (ANOVA); regression and correlation; application of statistical methods.

**IEN 361 Engineering Materials 3(3-0-6)**

*Prerequisite: CHM 121 Principles of Chemistry*

Metals, plastics, ceramics, composites electronics and nano-related as engineering materials; phase equilibrium diagrams and their interpretation; micro and macro structure with respect to their properties and manufacturing processes. Selection according to specific applications. Degradation protection.

**CPE 252 Computer Programming for Engineers 3(2-2-5)**

Introductory concepts of computers; algorithmic problem solving; program design and development methodology; introductory programming using a high-level programming language; programming practice in computer laboratory.

**Engineering Spacialized Courses****Compulsory Courses****CEN 261 Civil Engineering Materials and Testing 3(2-3-6)**

Prerequisite: IEN 361 Engineering Materials and CEN 223 Strength of Materials

The fundamental behaviors and properties, introduction to inspecting and testing of various civil engineering materials, steel and rebar, wood, cement, aggregates and admixtures, fresh and hardened concrete, highway materials, other civil engineering materials.

**CEN 284 Surveying Field Practice 1(0-80-40)**

*Prerequisite: CEN 283 Engineering Surveying*

GPS 10 days (80 hours) field surveying practice of surveying planning, reconnaissance, topographic survey, topographic mapping, long range leveling, individual theodolite setting and using and land coordinated by GPS receiver.

**CEN 285 Route Surveying 3(3-0-6)**

*Prerequisite: CEN 283 Engineering Surveying*

Surveying techniques, route location and design, horizontal and vertical curves, earthwork, alignment layout, route construction survey.

**CEN 320 Structural Analysis I 3(3-0-6)**

*Prerequisite: CEN 223 Strength of Materials*

Introduction to structural analysis; reactions, shears, and moments in statically determinate structures; graphic statics; influence lines of determinate structures; deflections of determinate structures by methods of virtual work, strain energy, and Williot-Mohr diagrams; analysis of statically indeterminate structures by method of consistent deformation.

- CEN 321 Structural Analysis II** 3(3-0-6)  
*Prerequisite: CEN 320 Structural Analysis I*  
Analysis of indeterminate structures by elastic load method, methods of slope and deflection, moment distribution, strain energy; influence line of indeterminate structures; introduction to plastic analysis; approximate analysis; introduction to matrix structural analysis.
- CEN 331 Reinforced Concrete Design** 4(3-3-6)  
*Prerequisite: CEN 320 Structural Analysis I*  
Fundamental behavior in thrust, flexure, torsion, shear, bond and interaction among these forces; design of reinforced concrete structural components by working stress and strength design concepts; design practice. Practice Practice in reinforced concrete design and detailing.
- CEN 332 Computer-Aided Engineering and Design** 3(2-3-6)  
Basic concepts of computer-aided engineering and design (CAE/CAD) in civil engineering; computer graphics and geometric modeling for structural and civil works; detailings of steel and concrete structures; programming in CAD; computer software packages for analysis and design.
- CEN 343 Hydraulics Laboratory** 1(0-3-2)  
*Prerequisite: CEN 342 Hydraulics*  
Hydraulic properties, hydrostatic force on a plane submerged surface, buoyant force and stability of floating object, Bernoulli's theorem, flow through small orifice, flow over sharp-edge weir, impact due to momentum change of flowing jet, frictional losses of flow in closed conduit, flow meter in pipe, Manning n coefficient in open channel flow, specific energy and hydraulic jump in open channel, testing a centrifugal water pump.
- CEN 344 Hydrology** 3(3-0-6)  
*Prerequisite: CEN 342 Hydraulics*  
Hydrologic cycles, weather circulation, precipitation, interception, evaporation, transpiration, evapotranspiration, infiltration, groundwater flow, stream flow, stream flow hydrographs, relations between precipitation and runoff, frequency analysis and probability in hydrology, reservoir routing, channel routing and applications of hydrology.

**CEN 362 Concrete Technology 3(2-3-6)****Prerequisite: IEN 361 Engineering Materials**

Theory: Physical and chemical properties of cement, ingredients and properties of concrete, mechanical properties and usages of hardened concrete, mix design of concrete, cement and aggregate testing, strength of concrete, durability of concrete, creep and shrinkage of concrete, and high performance concrete. Experiment: Test of hydraulic cement for normal consistency, setting time by using vicat and specific gravity; test of cement mortar for compressive strength and tensile strength; Test of portland cement for fineness by using air permeability apparatus; test for autoclave expansion of portland cement; test for presence of organic impurities in fine aggregates of concrete; test of aggregate for unit weight, specific gravity, absorption, abrasion resistance and sieve analysis; mix design of concrete; test of concrete for workability, compressive loading, tensile loading and flexural loading; demonstration of high compressive strength of concrete.

**CEN 370 Engineering Geology 3(2-3-6)***Prerequisite: CHM 121 Principles of Chemistry*

Introduction of mineral, rock and soil classification for engineers; structural geology, geomorphology and other topics in geology for engineers; application of geology to civil engineering works such as foundation, tunnel, dam and reservoir, etc.; laboratory study for rocks and minerals classification.

**CEN 371 Soil Mechanics 3(3-0-6)***Prerequisite: CEN 223 Strength of Materials*

Soil formation, index properties and classification of soil, compaction, permeability of soil and seepage problems, principle of effective stresses within a soil mass; stress distribution, compressibility of soil, shear strength of soil, earth pressure theory, slope stability, bearing capacity

**CEN 372 Soil Mechanics Laboratory 1(0-3-2)***Prerequisite: CEN 371 Soil Mechanics*

Soil investigation, Atterberg limit, test determination of specific gravity soil grains, grain size analysis of soil, soil classification, compaction test, California bearing ratio test, field density test, permeability test, direct shear test, unconfined compression test, triaxial compression test, consolidation test.

**CEN 412 Construction Engineering and Management 3(3-0-6)**

*Prerequisite: CEN 362 Concrete Technology*

Construction project delivery systems, engineering economy in construction, project organization, site layout, project planning and scheduling by Gant Chart and critical path method (CPM), modern construction technology, construction equipments, resource management, progress measurement and control , project controlling, safety and quality system in construction, construction laws and regulations, ethics.

**CEN 433 Steel and Timber Design 4(3-3-6)**

*Prerequisite: CEN 321 Structural Analysis II*

Design of steel and timber structures; tension and compression members; beams; beam-columns; built-up members; plate girders; connections; ASD and LRFD methods; design practice. Practice Practice in steel and timber design and detailing.

**CEN 444 Hydraulic Engineering 3(3-0-6)**

*Prerequisite: CEN 344 Hydrology and CEN 343 Hydraulics Laboratory*

Application of fluid mechanic principles to study and practice of hydraulic engineering, piping systems, water hammer, pumps and turbines, open channel flow, design of reservoir, dams, spillways, hydraulic models.

**CEN 473 Foundation Engineering 3(3-0-6)**

*Prerequisite: CEN 371 Soil Mechanics*

Subsurface investigation, bearing capacity of foundation, spread and mat foundation design, pile and caisson foundation design, settlement analysis, earth pressure problems and retaining structures and sheet pile wall; elementary of soil improvement; design practice Practice Practice in foundation engineering and detailing

**CEN 476 Highway Engineering Laboratory 1(0-3-2)**

*Prerequisite: CEN 481 Highway Engineering*

Soil and material testing methods for design and construction control of pavements; laboratory and field tests to evaluate basic properties of subgrade and construction materials for pavement design; field tests for construction control; pavement evaluations for overlay design.

- CEN 481 Highway Engineering** 3(3-0-6)  
*Prerequisite: CEN 283 Engineering Surveying*  
 Historical development of highways; highway administration; principle of highway planning and traffic analysis; geometric design and operations; highway finance and economic; flexible and rigid pavement design; highway materials; construction and maintenance of highways.
- CEN 490 Civil Engineering Training** 1(0-35-18)  
*Prerequisite: CEN 284 Surveying Field Practice*  
 Training in private sector, government sector or state enterprise relating to civil engineering work. All students must be in training for at least 6 weeks or at least 210 hours. Each student has to submit daily report every week and summary report upon the completion of the course.
- CEN 491 Civil Engineering Project I** 1 1(0-3-2)  
 Students work in group to do analytical study or design of an assigned civil engineering problem. The team of advisors comprises academics and/or experienced engineers. The main aspects included problem definition, assessment of various engineering features of alternative solutions, project planning and work scheduling, report preparation and presentation of project proposal.
- CEN 492 Civil Engineering Project II** 2 2(0-6-3)  
*Prerequisite: CEN 491 Civil Engineering Project I*  
 Continuation of proposed works in Civil Engineering Project I with the main purpose of applying all knowledge learned in Civil Engineering curriculum. The student will gain the experience in working as a group. The complete report has to be submitted and presented to project committee.
- GEN 494 Preparation for Cooperative Education** 1(0-2-1)  
 Students are required to pass a minimum 30-hour preparation session prior to their placement in a selected workplace. The main aspects include principles, concepts and processes of cooperative education; related rules and regulations; basic knowledge and techniques in working; communication and human relations; personality development; quality management system in workplace; presentations techniques and Report writing.

**CEN 495 Cooperative Project for Civil Engineering 3(0-9-5)***Prerequisite: GEN 494 Preparation for Cooperative Education*

76 Solving stage of problems set forth and defined from work in CEN 496, having been done under joint supervision of RSU and the workplace advisors, the completed work must thoroughly be presented to the designated committee for contingent credit.

Professional Elective Courses

**Elective Civil Engineering Courses****CEN 401 Advanced Engineering Mathematics 3(3-0-6)***Prerequisite: CEN 292 Applied Mathematics for Civil Engineering*

Ordinary and partial differential equations; Fourier series, introduction of Fourier transform and Laplace transform and applications to boundary value problems; vector analysis; matrices; Systems of linear equations; calculus of variation.

**CEN 402 Numerical Methods 3(3-0-6)***Prerequisite: CEN 292 Applied Mathematics for Civil Engineering*

Fundamentals of numerical methods; systems of linear equations; solving of nonlinear equations; approximate functions by regression analysis and interpolation; numerical differentiation and integration; ordinary and partial differential equations; Eigen-value problems.

**CEN 410 Contracts, Specifications and Cost Estimation 3(3-0-6)***Prerequisite: CEN 331 Reinforced Concrete Design*

Types, forms, and elements of construction contract, building elements, quantities survey, unit cost and cost analysis, general construction problems, supervision and professional ethics, responsibility according to the law.

**CEN 413 Engineering Project Management 3(3-0-6)***Prerequisite: CEN 331 Reinforced Concrete Design*

Project definition; principles of economics and decision making models applied to project selection; project management, planning and scheduling, organization structure and staffing; project implementation, monitoring, and control; project information systems; project termination; international project management; proposal preparation.



**CEN 432    Prestressed Concrete Design    3(3-0-6)**

*Prerequisite: CEN 331 Reinforced Concrete Design*

Concepts and principles of prestressing, materials for prestressing and their properties, prestressing systems, losses of prestress, analysis and design of statically determinate pretensioned and posttensioned members, moment-curvature relationship, flexural strength of members, design for shear, immediate and long-term deflection, anchorage design, design of piles and prestressed floor system, special structures such as cylindrical tanks and concrete pavement.

**CEN 435    Structural Building Design    3(3-0-6)**

*Prerequisite: CEN 331 Reinforced Concrete Design*

Analysis and design of reinforced concrete building structures; design of continuous beams and frames; design of slender columns, flat-slab and flat-plate floor system; design of shear walls and deep beams; application of computer softwares in structural building design.

**CEN 436    Bridge Design    3(3-0-6)**

*Prerequisite: CEN 321 Structural Analysis II and CEN 331 Reinforced Concrete Design*  
Theories of load distribution and application; selection of type and size of bridges; simply supported bridges in reinforced concrete, steel and prestressed concrete; design of bridge superstructure and substructure.

**CEN 437    Design of Small Building    3(3-0-6)**

*Prerequisite: CEN 331 Reinforced Concrete Design*

Starting of a small building project; building regulations and codes of practices; relation between architectural work, structural work and other engineering works; components of building; layout of building and structural systems; load distribution to structural members; structural analysis; design of foundation, 79 column, beam, slab, wall and stair with emphasis on reinforced concrete members; design of roof steel structures; a term project on small building design.

**CEN 438    Introduction to Finite Element    3(3-0-6)**

*Prerequisite: CEN 321 Structural Analysis II*

Weighted residual method; Galerkin method; Ritz method; basic concepts of interpolation; finite element in 1D and 2D problems; plane elasticity; torsion; heat transfer; seepage; incompressible inviscid flow; shallow water wave problems.

**CEN 439 Structural Dynamics and Earthquake Engineering 3(3-0-6)**

*Prerequisite: CEN 321 Structural Analysis II*

Essential characteristics of a dynamic problem: dynamics of single-degree-of-freedom system: undamped and damped equations of motion, free vibration response, response to harmonics forces, periodic forces, impulse forces, and response analysis in frequency-domain and time-domain to arbitrary loading; dynamics of multi-degree-of-freedom system: matrix equations of motion, natural frequency and mode shape, modal analysis of dynamic response; introduction to structural responses to earthquake excitation; introduction to vibration controls.

**CEN 446 Water Resource and Irrigation Engineering 3(3-0-6)**

*Prerequisite: CEN 344 Hydrology*

Introduction to water resource engineering, water resource planning and development process, conception of alternative technically feasible solutions and design of water resource development projects, basin system analysis of planned project by modeling, preliminary design of project components, water management on basin systems by modeling, reservoir rule curves, feasibility study of projects, financial feasibility analysis and benefit of projects, case study.

**CEN 447 Coastal and Harbor Engineering 3(3-0-6)**

Wave generation and wave diffraction, wave theory, wave reflection and wave refraction in coastal area, planning design construction and maintenance of coastline, harbor and the other longshore structures.

**CEN 448 Open Channel Flow 3(3-0-6)**

*Prerequisite: CEN 342 Hydraulics*

Overview of open channel flow, open channel flow characteristics, energy depth relationships, momentum principles in open channel flow, uniform flow, gradually-varied flow, water surface profile computations, design of channels, rapidly-varied flow and unsteady flow.

**CEN 451 Flood and Drought Engineering 3(3-0-6)**

*Prerequisite: CEN 342 Hydraulics*

Basic concept in river engineering; definitions and types of flood and drought disasters; application of statistics in flood and drought engineering; construction of flood map, flood and drought management; forecasting and warning of flood and drought disasters; mathematical model of floods and droughts; prevention and mitigation of floods and droughts disasters.

**CEN 452 Tsunami Engineering 3(3-0-6)**

*Prerequisite: CEN 342 Hydraulics*

Basic concept in coastal engineering; definition and type of tsunami; cause and cycle of tsunami generation, severity and damage from tsunami; warning system and warning center for tsunami; tsunami evaluation system; mathematical model of tsunami; construction of tsunami risk map; prevention and mitigation of tsunami.

**CEN 453 Storm and Storm Surge Engineering 3(3-0-6)**

*Prerequisite: CEN 342 Hydraulics*

Basic concept in coastal engineering; definition and type of storm and storm surge; cause and severity of storm and surge; warning system for storm and storm surge; construction of storm and storm surge risk maps; prevention and mitigation of storm and storm surge.

**CEN 461 Water Supply and Sanitary Engineering 3(3-0-6)**

*Prerequisite: CEN 342 Hydraulics*

Water demand and wastewater flow rates; raw water intake; design of water distribution system and water treatment plant; quantity of stormwater, hydraulics and drainage systems; design of collection and drainage systems; pump and pumping station; wastewater treatment systems; solid wastes management systems and plumbing systems.

**CEN 474 Landslides Mudslides and Debris Flows 3(3-0-6)**

*Prerequisite: CEN 371 Soil Mechanics*

Determination of soil shear strength; principles of soil slope stability analysis; slope movement classification and factors to influence the slope movement; technique for soil slope stability analysis; water pressure in soil slope; definition of landslide, mudslide and debris flow; factors to trigger landslide mudslide and debris flow; remedial for soil slope stabilization.

**CEN 475 Soil Improvement Techniques 3(3-0-6)**

*Prerequisite: CEN 371 Soil Mechanics*

Engineering properties of soil fundamental; a principle of soil improvement techniques, e.g. compaction, adding stabilizing materials, vertical drains preloading, soil reinforcement and cement column.

- CEN 480 Transportation Engineering 3(3-0-6)**  
*Prerequisite: CEN 283 Engineering Surveying*  
Planning and design for transportation by highway, railway, air, waterway and pipelines; transportation planning in urban and rural areas or in project area; planning and design for other transportation systems in project area; procedures for transportation system layout.
- CEN 482 Construction Surveying 3(3-0-6)**  
*Prerequisite: CEN 283 Engineering Surveying*  
Introduction to construction surveying; property survey, grade stakes; layout for building, layout for pipelines, layout for road, layout for bridge and as-built surveys.
- CEN 484 Photogrammetry 3(3-0-6)**  
*Prerequisite: CEN 283 Engineering Surveying*  
Basic concepts of photogrammetry, cameras and photography, flight planning, geometry of photograph, photogrammetric method, mosaic, rectification, orthophotography, stereoscopic plotting.
- CEN 485 Pavement Engineering 3(3-0-6)**  
*Prerequisite: CEN 224 and CEN 371*  
Development of road design, structure of pavement, design of flexible pavement, design of laterite road, design of rigid pavement, drainage of pavement, skid resistance of pavement, assessment of pavement quality for maintenance.
- CEN 486 Airport Design 3(3-0-6)**  
*Prerequisite: CEN 263 and CEN 480*  
Principle of location selection of airport, design, construction and maintenance of airport, facilities in an airport.
- CEN 487 Fundamental of Geographic Information System 3(3-0-6)**  
*Prerequisite: CEN 283 Engineering Surveying*  
Introduction to Land Information System and Geographic Information System; digital mapping, spatial data sources; fundamentals of data capture and conversion; data quality; data structure for GIS; database management system; examination of engineering applications in GIS; project management.

- CEN 488 Traffic Engineering** 3(3-0-6)  
*Prerequisite: CEN 283 Engineering Surveying*  
Analysis of traffic problems including field studies, surveys and the interpretation of survey data; relating regulations, equipments and control methods.
- CEN 489 Geometric Design of Highway** 3(3-0-6)  
*Prerequisite: CEN 283 Engineering Surveying*  
Design controls and criteria, design speed, horizontal alignment, vertical alignment, cross-section, geometric design of intersection at grade and interchanges.
- CEN 496 Cooperative Education for Civil Engineering** 6(0-35-18)  
*Prerequisite: GEN 494 Preparation for Cooperative Education*  
Training as a full-time employee in a cooperative organization related to civil engineering work for at least 16 weeks. Each student is assigned a particular task that must be completed within the training period. Diary records must be submitted weekly to the advisor of each student. Students are evaluated by the supervisor of the organization at the end of the course.
- CEN 499 Special Topics in Civil Engineering** 3(3-0-6)  
Study of special topics assigned by the instructor with the approval of the chair person of the department.