

COURSE DETAILS

10111 English for Communication

(6 credits)

Course Learning Outcomes

1. To be able to use English as a means for communication.
2. To study structures, vocabulary and important English idioms.
3. To equip students with skills in listening, speaking, reading and writing in English for accuracy and appropriateness in various situations

Course Description

Structure, vocabulary and English idioms used in listening, speaking, reading and writing English for communication.

10121 Human Civilization

(6 credits)

Course Learning Outcomes

1. To have knowledge on Eastern and Western civilization in terms of politics, economy, and society.
2. To understand human civilization in the past which is fundamental of the current civilization.
3. To realize and appreciate the values of human civilization.

Course Description

Knowledge on Eastern and Western civilization human has created in terms of politics, economy, society, wisdom, arts, as well as science and technology.

10131 Human Society

(6 credits)

Course Learning Outcomes

1. To understand the existence of human community and society.
2. To understand the political, legal, economic and social mechanisms affecting an organization of human society.
3. To promote the responsibility to the society and nation.

Course Description

Basic characteristics of being human; cohesion into communities and societies; human distribution and settlements; the components of society; human behavior in society; political, legal, economic and social mechanisms affecting the organization of human society; social problems and methods to solve them; promotion of a good society.

10151 Thai Studies

(6 credits)

Course Learning Outcomes

1. To learn about Thailand's history, society, language and culture.
2. To be able to apply the course knowledge to daily life.
3. To understand and take pride in what it means to be Thai.

Course Description

Knowledge about Thai in terms of history, settlement, politics, economy, culture, religion and ritual, language and literature, arts and culture.

10161 Thai for Communication**(6 credits)*****Course Learning Outcomes***

1. To be able to use Thai language as a tool for communication.
2. To improve language skill for communicate effectively and creatively.
3. To be able to use language in daily life and to pursuit of knowledge.

Course Description

Significance of language, idea and communication; the art of using word, sentence, idiom, phrase; development of listening, speaking, reading and writing skills to communicate effectively and creatively; using Thai language in daily life to pursuit of knowledge and transfer knowledge.

30105 Accounting and Finance for Construction**(6 credits)*****Course Learning Outcomes***

1. To have knowledge in construction accounting concept, financial statement, accounting process, and revenue and expense.
2. To have knowledge in managerial accounting for construction.
3. To have knowledge in concept of finance for construction.
4. To have knowledge in current assets and fixed assets management, and construction financing.

Course Description

Concepts of accounting for construction; financial statements; income and capital revenue and expense recognition for construction; managerial accounting for construction in term of budgeting; using of accounting information for decision making; financial statement analysis; internal control and performance evaluation; concepts of finance, current assets and fixed assets management; construction financing.

30205 Mathematics and Statistics**(6 credits)*****Course Learning Outcomes***

1. To acquire knowledge on basic mathematics that can be applied to other academic disciplines.
2. To acquire knowledge on basic statistics.

Course Description

Set; logic; permutation and combination; probability; cash; interest; annual value; number system; matrix; determination and application; relation; function; sequences and series in mathematical analysis; differentiation; basic understanding about statistics; descriptive statistics; random variables; discrete probability distribution; normal distribution; sampling distribution and estimation.

31305 Information Technology for Construction Management**(6 credits)*****Course Learning Outcomes***

1. To understand basic principle of information technology.
2. To understand principle of work monitoring for statistics data collecting.
3. To have knowledge in information technology management for construction.

Course Description

Concepts of information technology for computer management, hardware and software management; information communication and computer network; information and database; information security; information system development; tools for efficiency development, information technology for financial and accounting in construction project analysis; construction planning; construction quantity survey and cost estimation; field work management; construction equipment management; construction supervision and inspection; and facility management.

31306 Theory and Practice in Project Management for Construction**(6 credits)***Comprises 2 courses of 3 credits each***31306-1 Theory of Project Management for Construction*****Course Learning Outcomes***

1. To have knowledge of concepts and theories in construction project management.
2. To have knowledge of techniques and tools in construction project management.
3. To have knowledge and ability in applying such principles to construction projects management.

Course Description

Concepts and theories of construction project management, Organizational management in construction projects, Construction project operation, Scope of works, Construction process, Resource management in construction project, Time, cost and quality management in construction project, Coordination for construction, Productivity management, Risk management, Dispute resolution, and Project handover.

31306-2 Practice in Project Management for Construction***Course Learning Outcomes***

1. To have skills in construction project management.
2. To have skills in techniques and tools in construction project management.
3. To be able to apply principles of construction projects management.

Course Description

Practice in construction project management, Organizational management in construction projects, Construction project operation, Scope of works, Construction process, Resource management in construction project, Time, cost and quality management in construction project, Coordination for construction, Productivity management, Risk management, Dispute resolution, and Project handover.

31307 Theory and Practice in Construction Planning**(6 credits)***Comprises 2 courses of 3 credits each***31307-1 Theory of Construction Planning*****Course Learning Outcomes***

1. To have knowledge in various system of construction planning and be able to use the effective and suitable plan.
2. To have knowledge in construction resource planning, plan implementation and monitoring.
3. To have knowledge in plan updating technique, expediting, and construction planning for prefabrication system.
4. To have knowledge in quality assurance planning.

Course Description

Concept of management and construction planning, Principles of planning, Work study, Construction planning techniques such as Bar chart, Arrow Network Diagram, Precedence Network Diagram, PERT, Line of Balance and others, Construction resources planning, Cost planning and control in construction, Quality planning in construction, Plan implementation and monitoring, Plan updating, and Expediting.

31307-2 Practice in Construction Planning

Course Learning Outcomes

1. To have skills in construction planning in various systems and be able to decide on a suitable and efficient plan.
2. To have skills in plan updating to resources, plan implementation and monitoring.
3. To have skills in plan updating technique, expediting, and construction planning for prefabrication system.
4. To have skills in quality assurance planning.

Course Description

Practice in work study, Preparation for construction planning, Construction planning techniques such as Bar chart, Arrow Network Diagram, Precedence Network Diagram, PERT, Line of Balance and others, Resources planning, Cost planning and control, Quality planning in construction, Preparation before plan implementation, Construction plan controlling and monitoring, Plan updating and expediting.

31308 Quantity Survey and Cost Estimate

(6 credits)

Comprises 2 courses of 3 credits each

31308-1 Theory of Quantity Survey and Cost Estimate

Course Learning Outcomes

1. To have knowledge in method of quantity survey and cost estimation.
2. To have knowledge in construction cost analysis of various construction components and types.
3. To have knowledge in cost control within construction estimated budget.
4. To have knowledge in practical application of data, information and information technology for quantity survey and cost estimation.

Course Description

Basic principles of quantity survey and cost estimation, Construction itemization and method of measurement, Unit pricing, Cost estimation for architectural work, structural work, building service system work and civil work, Cost summarization for construction cost estimation, Project cost control within construction estimated budget, Information technology for quantity survey and cost estimation.

31308-2 Practice in Quantity Survey and Cost Estimate

Course Learning Outcomes

1. To have skills in quantity survey and cost estimation for implementation in professional practice.
2. To have skills in construction cost analysis of various construction components and types.
3. To have skills in cost control within construction estimated budget.
4. To have skills in data searching and application of information and information technology for quantity survey and cost estimation.

Course Description

Practice in approximate quantity survey and cost estimation, Detailed quantity survey and cost estimation, Construction itemization, Preparation of Bill of quantity, Preparation of document, Method of measurement, Unit pricing for various construction components and types, Cost summarization for construction cost estimation. Comparative analysis of construction prices in bidding process and controlling of construction project budget, Implementation of information technology for quantity survey and cost estimation.

31309 Theory and Practice in Construction Field Work Management**(6 credits)***Comprises 2 courses of 3 credits each***31309-1 Theory of Construction Field Work Management*****Course Learning Outcomes***

1. To have knowledge in construction preparation and field work management, problem solving according to various construction sites.
2. To have knowledge for safety and hygienic in construction site.
3. To know the knowledge in shop drawing and as-built drawing.

Course Description

Construction preparation before construction processes, Construction resource management, Environmental management in construction site, Construction site layout planning, Coordination between relevant groups and organizations, Construction field work management, Preparation of shop drawing and as-built drawing, Construction safety management.

31309-2 Practice in Construction Field Work Management***Course Learning Outcomes***

1. To have skills in preparation and management of construction field work and hygienic in construction site.
2. To have skills in construction resources management and coordination between relevant groups and organizations.
3. To have skills in construction technique management, construction drawing and documents in construction site.
4. To have skills in safety management in construction site.

Course Description

Practice in construction preparation before construction processes, Site layout planning, Hygienic in construction site, Construction resources management and coordination between relevant groups and organizations, Temporary structural work, Construction technique for various types of construction, Construction drawing and documents management in construction site, Construction safety management.

31405 Project Analysis**(6 credits)*****Course Learning Outcomes***

1. To have knowledge in concept, theory and principle of project management.
2. To have knowledge in concept, theory and principle of project analysis.
3. To understand practical application of project analysis in private and public projects.

Course Description

Concept, theory and principle of project development, project planning, project analysis; project risk management; project evaluation; practical application of project analysis in private and public project.

31407 Large-scale Construction Technology**(6 credits)*****Course Learning Outcomes***

1. To acquire knowledge and understand in large-scale construction technology.
2. To acquire knowledge and understand in large-scale construction management.
3. To acquire knowledge and understand in safety management large-scale construction.

Course Description

General knowledge of large-scale construction technology; large-scale construction project management; resource management in large-scale construction; construction technology for foundation and substructure system; large-scale building structural system; large-scale building; electrical and mechanical system; sanitation and other special systems; earth work; civil work; embankment work; large-scale environment management, other special constructions; safety management for large-scale construction.

31410 Sustainable Construction Management**(6 credits)****Course Learning Outcomes**

1. To acquire knowledge and understand in concept and principle of sustainable construction management.
2. To have knowledge in assessment criteria for sustainable energy and environment.
3. To have knowledge in techniques and tools for sustainable construction management.
4. To have knowledge in practical application of sustainable construction management principle.

Course Description

Concepts of sustainable construction management; assessment criteria for local and international sustainable energy and environment; quality management of sustainable environment; value engineering; Lean construction technology construction waste management, energy management; construction water management; sustainable materials and resources management; logistics and supply chain management; sustainable environmental management in construction site; safety management; risk management; economic assessment; and social responsibility.

31411 Facility Management**(6 credits)****Course Learning Outcomes**

1. To acquire knowledge and understand in facility management.
2. To have knowledge in procedure and process of facility management.
3. To have practical knowledge in facility management.

Course Description

Principles and processes of facility management; strategic planning; facility management; building management; building technology; facility maintenances; finance and expenditure for facility; facility economic assessment; energy management; sustainable facility management; information technology for facility management; safety in building; regulation and law for facility management.

31412 Theory and Practice in Construction Supervision and Inspection**(6 credits)****Comprises 2 courses of 3 credits each****31412-1 Theory of Construction Supervision and Inspection****Course Learning Outcomes**

1. To understand perspective of construction supervision and Inspection.
2. To have knowledge in method and procedures of construction supervision and Inspection.
3. To understand procedures and techniques of construction supervision and Inspection.
4. To have practical knowledge in construction supervision and Inspection.

Course Description

General knowledge of construction supervision and inspection, Procedure of construction inspection, Supervision and inspection of earth work and foundation, reinforce concrete work, formwork work, timber and structural steel work, architectural work, building system work, civil engineering work, Construction safety and materials testing.

31412-2 Practice in Construction Supervision and Inspection***Course Learning Outcomes***

1. To have skills in method and procedures of construction supervision and Inspection.
2. To have skills in procedures and techniques of construction supervision and Inspection.
3. To have practical skills in construction supervision and Inspection.

Course Description

Practice in construction supervision and Inspection, principle in construction supervision and Inspection of earth work and foundation, reinforced concrete technology, concrete formwork, timber and structural steel work, architectural work, building system work, civil engineering work, Safety and materials testing.

31413 Theory and Practice in Management of Construction Equipment**(6 credits)*****Comprises 2 courses of 3 credits each*****31413-1 Theory of Construction Equipment*****Course Learning Outcomes***

1. To have knowledge in construction equipment.
2. To have knowledge in principle of using equipment for each construction type.
3. To have knowledge in principle of construction equipment management and maintenance.

Course Description

Knowledge in construction equipment development, Fundamental of equipment, Principle of using equipment for each construction type, Principle of construction equipment management and maintenance.

31413-2 Practice in Management of Construction Equipment***Course Learning Outcomes***

1. To have skills in construction equipment management.
2. To have skills in management of construction equipment maintenance.

Course Description

Practice in basic equipment management, Construction equipment management for each construction type, Management of construction equipment maintenance.

31414 Construction Management Project and Professional Experience in Construction Management**(6 credits)*****Comprises 2 courses of 3 credits each*****31414-1 Construction Management Project*****Course Learning Outcomes***

1. To compile knowledge and skill of construction management and apply to project implementation.
2. To be able to plan and operate construction management project, project problem solving, project evaluation, report and presentation.
3. To initiate creativity and develop body of knowledge in construction management profession.

Course Description

Study and practice in principle of project preparation, project planning and operation, project problem solving, project evaluation, report and presentation, by practice in construction project preparation, implement and/or develop project which use knowledge and skill related to construction management profession, operate by individual or by group according to types of project, complete and submit in time.

31414-2 Professional Experience in Construction Management

Course Learning Outcomes

1. To apply theoretical part of construction management profession to practical part.
2. To have skill in problem analysis and decision making for problem solving in construction management.
3. To have knowledge in application of regulations and laws related to construction work.
4. To develop and strengthen leadership and skill for good construction management.
5. To develop profession ethics for graduates in construction management professional practice.

Course Description

Practical application of theoretical part of construction management profession to practical part, Problem solving and decision making, Related laws for construction, Construction contract and contract management, Professional practice ethics for construction management, Group dynamics and leadership development.

32330 Managerial Economics and Taxation

(6 credits)

Course Learning Outcomes

1. To acquire knowledge about economics concepts and principles.
2. To be able to apply economics principles in business administration.
3. To acquire knowledge about business taxation regulations and methods.

Course Description

Application of economic principles in management; concepts of profit; demand analysis and forecasting; production analysis; cost analysis; market and competition analysis; pricing; managerial decision-making under conditions of uncertainty; study and analysis of gross national income, aggregate demand and aggregate supply; economic outlook analysis and forecasting; inflation; deflation; international trade; government policies for economic planning and effect on managerial planning and decision-making.

Principles and methodology of taxation according to revenue code and related laws; income tax for ordinary persons and juristic persons, value-added tax, business tax, stamp duty, petroleum tax, excise tax, customs tax and local tax.

54130 Occupational Health and Safety Management Technology

(6 credits)

Course Learning Outcomes

1. To elucidate concepts of accident, investigation and analysis of accident, loss control, and propose accident prevention.
2. To use job safety analysis technique, provide safety operation procedure, and provide safety manual.
3. To be able to use occupational health and safety management technology prior to accident.
4. To be able to use occupational health and safety management technology during and after accident.
5. To be able to select and use personal protective equipment appropriately to hazards while working.
6. To provide training and develop safety work.
7. To elucidate principles of planning and provide occupational health and safety report.
8. To provide security information system, determine public relations method, and campaign of industrial safety.
9. To be able to assess and manage risk.

Course Description

Concepts and theories of accident; investigation and analysis of accident; loss analysis; work safety technique; use of personal protective equipment; safety manual; safety sign; responsible duty of occupational health and safety; organizations safety policy; welfare provision; work information system and preparation of annual report on occupational health and safety; principles of risk assessment and management; management system on occupational health and safety, and various relevant management systems.

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