

Learning Content

EP-M.6

EN30105 Foundation English 5

Study foundation English about recommendations, explanation, directions, descriptions, news, announcements, poems, skits, diagrams, graphs, initials, non-fictions, fictions, personal information, various local, social, and global situations and events, languages, voices, social manners and cultures, custom, traditions, festivals, language structures, idioms, proverbs, poems, ways of life, beliefs, and cultures of native speakers, information related to other learning content groups. Conduct listening, speaking, reading, and writing using process of establishing knowledge and understanding, reading process, process of establishing practical skills, working process, process of language skills, process of establishing attitudes, process of conceptualization, process of analysis, process of establishing realization, and process of establishing communicative knowledge and understanding to create knowledge and understanding, communicative ability, thinking ability, problem-solving ability, life skills, and ability to use technology. At the same time, students will have the following intended characteristics which are nationalism, religiosity, loyalty, disciplines, diligence, self-sufficiency, endeavor, love of being Thai, and public mind.

EN30106 Foundation English 6

Study foundation English about recommendations, explanation, directions, descriptions, news, announcements, poems, skits, diagrams, graphs, initials, non-fictions, fictions, personal information, various local, social, and global situations and events, languages, voices, social manners and cultures, custom, traditions, festivals, language structures, idioms, proverbs, poems, ways of life, beliefs, and cultures of native speakers, information related to other learning content groups. Conduct listening, speaking, reading, and writing using process of establishing knowledge and understanding, reading process, process of establishing practical skills, working process, process of language skills, process of establishing attitudes, process of conceptualization, process of analysis, process of establishing realization, and process of establishing communicative knowledge and understanding to create knowledge and

understanding, communicative ability, thinking ability, problem-solving ability, life skills, and ability to use technology. At the same time, students will have the following intended characteristics which are nationalism, religiosity, loyalty, disciplines, diligence, self-sufficiency, endeavor, love of being Thai, and public mind.

EN30205 English Reading-Writing 5

Study English on the topics of news, announcements, poems, skits, and pictures, different non-text information styles such as maps, graphs, and initiatives. Study non-fictions, fictions, personal information, languages, voices, social manners and cultures, traditions and customs, festivals, language structures, idioms, proverbs, poems, ways of life, beliefs and cultures of native speakers, and information related to other learning content groups. Use process of establishing knowledge and understanding, reading process, process of establishing practical skills, working process, process of language skills, process of establishing attitudes, process of conceptualization, process of analysis, process of establishing realization, and process of establishing communicative knowledge and understanding to create knowledge and understanding, communicative ability, thinking ability, problem-solving ability, life skills, and ability to use technology. At the same time, students will have the following intended characteristics which are nationalism, religiosity, loyalty, disciplines, diligence, self-sufficiency, endeavor, love of being Thai, and public mind.

EN30206 English Reading-Writing 6

Study English on the topics of news, announcements, poems, skits, pictures, different non-text information styles such as maps, graphs, and initiatives. Study non-fictions, fictions, personal information, languages, voices, social manners and cultures, traditions and customs, festivals, language structures, idioms, proverbs, poems, ways of life, beliefs and cultures of native speakers, and information related to other learning content groups. Use process of establishing knowledge and understanding, reading process, process of establishing practical skills, working process, process of language skills, process of establishing attitudes, process of conceptualization, process of analysis, process of establishing realization, and process of

establishing communicative knowledge and understanding to create knowledge and understanding, communicative ability, thinking ability, problem-solving ability, life skills, and ability to use technology. At the same time, students will have the following intended characteristics which are nationalism, religiosity, loyalty, disciplines, diligence, self-sufficiency, endeavor, love of being Thai, and public mind.

EN30211 English for Academic Achievement 5

Study English on the topics of news, announcements, poems, skits, and pictures, different non-text information styles such as maps, graphs, and initiatives. Study non-fictions, fictions, personal information, various experiences, incidents, themes from analyzed stories, languages, voices, social manners and cultures, traditions and customs, festivals, language structures, idioms, proverbs, poems, ways of life, beliefs and cultures of native speakers, and information related to other learning content groups. Use process of establishing knowledge and understanding, reading process, process of establishing practical skills, working process, process of language skills, process of establishing attitudes, process of conceptualization, process of analysis, process of establishing realization, and process of establishing communicative knowledge and understanding to create knowledge and understanding, communicative ability, thinking ability, problem-solving ability, life skills, and ability to use technology. At the same time, students will have the following intended characteristics which are nationalism, religiosity, loyalty, disciplines, diligence, self-sufficiency, endeavor, love of being Thai, and public mind.

EN30212 English for Academic Achievement 6

Study English on the topics of news, announcements, poems, skits, and pictures, different non-text information styles such as maps, graphs, and initiatives. Study non-fictions, fictions, personal information, various experiences, incidents, themes from analyzed stories, languages, voices, social manners and cultures, traditions and customs, festivals, language structures, idioms, proverbs, poems, ways of life, beliefs and cultures of native speakers, and information related to other learning content groups. Use process of establishing knowledge and understanding, reading

process, process of establishing practical skills, working process, process of language skills, process of establishing attitudes, process of conceptualization, process of analysis, process of establishing realization, and process of establishing communicative knowledge and understanding to create knowledge and understanding, communicative ability, thinking ability, problem-solving ability, life skills, and ability to use technology. At the same time, students will have the following intended characteristics which are nationalism, religiosity, loyalty, disciplines, diligence, self-sufficiency, endeavor, love of being Thai, and public mind.

EN30245 English for Life Skills 5

The Students will study and listen to a range of English texts. They will use learning skills in the 21st century, which encourages the students to be able to have listening, critical thinking and problem solving skills. The learning skills will be used to make students possess learners' key competencies, which are thinking capability, problem solving capability, capability in applying life skills and capability in technological application. This will be done through the teaching and learning focusing on promoting Thai wisdom with respect to the language and literature and religion and tradition. Teaching and learning also promotes students to live under the Sufficiency Economy Philosophy. Students will be provided with desirable characteristics such as love of nation, religion and king, honesty and integrity and self-discipline. Additional important characteristics are avidity for learning, observance of principles of Sufficiency Economy Philosophy in one's way of life, dedication and commitment to work, cherishing Thai-ness, public-mindedness and gentlemen of Assumption College.

EN30246 English for Life Skills 6

The Students will study and learn how to give effective presentations. They will use learning skills in the 21st century, which encourages the students to be able to have critical thinking and problem solving skills. The learning skills will be used to make students possess learners' key competencies, which are thinking capability, problem solving capability, capability in applying life skills and capability in technological application. This will be done through the teaching and learning focusing on promoting Thai wisdom with respect to the language and literature and religion and tradition. Teaching and learning also promotes students to live under

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the Sufficiency Economy Philosophy. Students will be provided with desirable characteristics such as love of nation, religion and king, honesty and integrity and self-discipline. Additional important characteristics are avidity for learning, observance of principles of Sufficiency Economy Philosophy in one's way of life, dedication and commitment to work, cherishing Thai-ness, public-mindedness and gentlemen of Assumption College.

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HP30105 Foundation Health Studies and Physical Education 5

Students will study the following topics: structures and functions of nervous system, central nervous system, peripheral nervous system, promoting and maintaining efficient functions of nervous system; male and female reproductive systems, promoting and maintaining efficient functions of reproductive system; endocrine system, promoting and maintaining efficient functions of endocrine system; health promotion and disease prevention in the community, concepts of health promotion and disease prevention in the community, roles and responsibilities of people on health promotion and disease prevention in the community, participation in health promotion and disease prevention in the community, health networks related to health promotion and disease prevention; addictive substances, current situations about addictive substances, and effects from possession, use and sale of addictive substances.

Students will additionally use many skills in this course: critical thinking skill; problem-solving skill; creative and innovative thinking skill; collaborative, teamwork and leadership skills; information communication and media literacy skill; flexibility and adaptability; creativity and self-confidence; social and cross-cultural skill; leadership and responsibility. They will learn to be a creator or producer and be reliable.

The following abilities will subsequently be formed: communicative ability, thinking ability, life skill ability, problem solving ability and technological ability.

Students will also be supported to have the following desired characteristics: love of nation, religion and king; honesty and integrity; self-discipline; avidity for learning; observance of self-sufficiency; dedication and commitment to work; cherishing Thai-ness; public-mindedness; and attributes of an AC gentleman.

HP30106 Foundation Health Studies and Physical Education 6

Students will study the following topics: characteristics of health advertisements, direct and indirect advertising media, influences of advertising media on health, health advertising media that affects people's health, ways to be a wise consumer and to select health products safely, criteria to assess health advertising media, buying health products, case studies about consumer protection laws, accidents in the community, accident situations, causes of accidents, types of accidents, a plan to reduce accidents and promote safety in the community.

Students will additionally use many skills in this course: critical thinking skill; problem-solving skill; creative and innovative thinking skill; collaborative, teamwork and leadership skills; information communication and media literacy skill; flexibility and adaptability; creativity and self-confidence; social and cross-cultural skill; leadership and responsibility. They will learn to be a creator or producer and be reliable.

The following abilities will subsequently be formed: communicative ability, thinking ability, life skill ability, problem solving ability and technological ability.

Students will also be supported to have the following desired characteristics: love of nation, religion and king; honesty and integrity; self-discipline; avidity for learning; observance of self-sufficiency; dedication and commitment to work; cherishing Thai-ness; public-mindedness; and attributes of an AC gentleman.

HP30207 Physical Education 1

Students will study the following topics: team sports; creative movements; concepts about movements in different kinds of sports; defense and offense principles; cooperation in team; sports competition; rights, rules, regulations, safety, tactics while playing; competing with others; responsibility when participating in physical activities; playing in team; exercises; physical fitness test; individual and team sports. Students will also learn to accept and see values of doing physical exercise and playing sports regularly. They will choose types of sports suitable to places and locality such as football, futsal, Sepak takraw, etc.

Students are expected to have sporting spirit and true competitive spirit as well as appreciate the aesthetics of sports when playing, watching and competing.

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Students will additionally use many skills in this course: critical thinking skill; problem-solving skill; creative and innovative thinking skill; collaborative, team work and leadership skills; information communication and media literacy skill; flexibility and adaptability; creativity and self-confidence; social and cross-cultural skill; leadership and responsibility. They will learn to be a creator or producer and be reliable.

The following abilities will subsequently be formed: communicative ability, thinking ability, life skill ability, problem solving ability and technological ability.

Students will also be supported to have the following desired characteristics: love of nation, religion and king; honesty and integrity; self-discipline; avidity for learning; observance of self-sufficiency; dedication and commitment to work; cherishing Thai-ness; public-mindedness; and attributes of an AC gentleman.

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ST30275 Multimedia Creation

Study of basic concepts, elements and technologies related to multimedia, creating a slide animation, recording and editing including development of multimedia project by using understanding process, thinking process, technological process, and group dynamics to gain knowledge and understanding and to be able to apply knowledge to apply in everyday life, as well as disciplined pursuit learning and commitment to work.

Learning Content

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ST30214 Universal Physics 4

Study about the volume of elasticity of solid, stress, strain, value of Young's modulus, general properties of fluid, density, pressure, Pascal's principle, surface tension, buoyancy, Bernoulli's equation, flow of streamline fluid, thermal volume, specific heat capacity, latent heat, boiling point, freezing point, properties of gas, gas model, the kinetic theory of gas, internal energy of gas, 1st law of thermodynamics, atomic model, atomic structure, assessment of electric ion and mass of electron from Thomson and Millikan's experiment, duality of waves and particles, Photoelectric Effect and Compton Effect, discovery of radioactivity, disintegration of radioactive nucleus, isotope, nuclear stability, mass defect, binding energy, nuclear reaction of nucleus of radioactive substances, energy values obtaining from nuclear reaction, advantages and disadvantages from radioactivity. Use the process of establishing knowledge and understanding, scientific skills and process which are observation, data exploration, experiment, making judgments from data, data implication, data interpretation and drawing conclusion, analysis, explanation, and discussion to create knowledge, understanding, and ability to apply the knowledge to real-life situations with honesty, diligence, endeavor, and disciplines.

ST30215 Universal Physics 5

Study the motion of object, linear motion, motion in one dimension, Newton's Law of motion, equilibrium in an object's motion, projectile motion, circular motion, and simple harmonic motion, electric field, magnetic field, waves and energy in daily life, mechanical wave, types of waves, velocity of wave, properties of wave, sound wave, formation and properties of sound wave, hearing, effects of noise pollution affecting living beings and environment, electromagnetic wave, origin/nature of electromagnetic wave, electromagnetic spectrum, advantages and dangers of electromagnetic wave, nuclear reactions and radioactivity, effects of radioactivity on living beings and environment. Use the process of establishing knowledge and understanding, scientific skills and process which are observation, data exploration, experimentation, making judgments from data, data implication, data interpretation and drawing conclusion, analysis, explanation, and discussion to create knowledge, understanding, and

ability to apply the knowledge to real-life situations with honesty, studiousness, endeavor, and disciplines.

ST30234 Universal Chemistry 4

Study the properties of electrolyte solution, ions in acid and base solutions, acid-base theories, acid-base pairs, disintegration of strong acid, strong base and weak acid and weak base, disintegration of fresh water and calculate the change of concentration of hydroniumion or hydroxideion in water, pH values of solutions, indicators of acid-base reactions and pH values of indicators, advantages of acid-based solution in daily life and living creatures, acid-base reaction, formation of salt, acid-base properties of salt and hydrolysis reaction, buffer solution, buffer solution in nature and apply the knowledge to daily life situations, chemical reaction with electron transfer, reaction between metals and some solutions and advantages of redox reaction, balancing redox equations by oxidation number and half reaction, Galvanic cell connection, diagram writing, equation showing reaction in Galvanic cell including sequencing abilities in elements or ions acceptor and abilities in performing as reducing agents and oxidizing agent of elements or ions, working principles and types of Galvanic cell, primary cells and secondary cells and advantages of Galvanic cell, applying electrolyte cell to use in daily life situations and differences between Galvanic cell and electrolyte cell, prevention of corrosion, technological progress of electrochemical cell, process of smelting various minerals used in industry and the uses of various minerals in daily life situations, principles of NaCl industry, analyze data, discuss and present data about the uses of NaCl in industries and daily life situations.

Use the process of establishing knowledge and understanding, analytical process, scientific skills and process which are observation, data exploration, experimentation, analysis, explanation, discussion, making judgment from data, data implication, classification, data interpretation, and drawing conclusion, calculation, writing equations, and data presentation to create knowledge, ideas, understanding, and ability to apply the knowledge to real-life situations along with possessing honesty, diligence, endeavor, and disciplines.

ST30235 Universal Chemistry 5

Learn about the process of smelting used in various industries and minerals, principles of the industry in the mineral used as a raw material in the production of various industrial goods, ceramics manufacturing industry, NaCl Data Analysis, describe and present information about the use of NaCl in the industry and in everyday life, fertilizer industry, Atomic structure, and the nuclear symbol of the element, atomic arrangement, the relationship between the electrons in the outer energy level and the properties of the elements and the reaction, arranging elements and predicting the properties of elements in the periodic table, chemical bonding in the crystal lattice and in the molecule of the substance, the relationship between the boiling point, the melting point and the state of the substance, or the bond between the particles of the substance. Equations of common chemical reactions found in everyday life. Describe the effects of chemicals on organisms and the environment, rate of reaction Factors that affect the rate of chemical reactions and to use the knowledge, petroleum gas separation process and refining crude oil, utilization of natural gas extraction and refining of crude oil, including the effects of products on organisms and the environment, polymerization Properties of Polymer, the use of polymers, including the effects of the production and use of polymers on organisms and the environment, the beneficial components and reactions of certain carbohydrates, the beneficial components and certain reactions of fats and oils and some reactions of protein and nucleic acid

Use the process of creating knowledge, scientific process and scientific process skills, including analysis, description, discussion, information, review Information, meaning classification, interpretation of data and conclusions, calculations, equations, and data presentation to make the knowledge. Have the ability to solve problems, ability to think, ability to use life skills, communication skills, ability to use technology and can apply the knowledge to apply in daily life. Possess the love The King, be honest, discipline, avidity, sufficient, commitment to work, Thai-ness, a gentleman of Assumption.

ST30204 Mechanical Properties of Matter and Modern Physics

Students will study the following topics: elasticity of solid materials, stress and strain, modulus of elasticity, pressure of liquid, Pascal's law, the upward buoyant force and Archimedes' principle, the viscous force and the surface tension, Bernoulli's Equation, the effects of heat on matters, properties of matters when heat is added, the transfer of heat in matters, physical features of gas and properties of gas, kinetic theory of gases, internal energy of a system and the first law of thermodynamics, structure of matters and atomic model, discovery of the electron, experiments of Thomson, experiments of Milligan, the spectrum of the hydrogen atom based on the Bohr Model, photoelectric effect, Compton effect, De Broglie hypothesis, quantum mechanics, Heisenberg uncertainty principle, the discovery of radioactivity, components of nucleus, the discovery of neutron, decay of radioactive elements and isotopes, nuclear force, the binding energy and mass defect, benefits and harms caused by the radioactive elements.

Students are expected to **use the scientific process skills** including observing, searching for information, performing experiments, giving informed opinion, presenting information, interpreting information, making a conclusion, analyzing, explaining, and discussing. Students are also **expected to acquire** the ability to solve problems, to think, and to use technology. They will subsequently have knowledge and understanding and be able to apply it in everyday situations. The course is additionally **aimed** for students to demonstrate the following characteristics: being honest, having discipline, being dedicated for work, and having learning skills and skills to create innovation.

ST30205 Science Aptitude in Physics

Students will study the following topics: the International System of Units (SI) and the scientific notation, significant figures, measurement, errors obtained from measuring quantity of motion, graph of a relation representing quantities of motion, the linear horizontal motion, the linear vertical motion, motion and Newton's law, a state of equilibrium of an object, moment of force, kinetic energy, gravitational potential energy, spring potential energy, the principle of mechanical energy, impulse, impulsive force and momentum change of objects, the law of

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momentum conservation and collision in 1 and 2 dimensions, Coulomb's law, electric field, electric potential, work due to transfer of electric charge, capacitor and the energy stored on a capacitor, electric current through the conducting wire, Ohm's law, resistance, resistivity, resistor, connecting a resistor to a battery in series and parallel in the direct current circuit, electric energy and electric power, magnetic flux and magnetic field, magnetic force and charged particles, magnetic force acting on the current-carrying wire, Faraday's law and transformer, potential difference and the effective value of current in the AC circuit, impedance in series and parallel RLC circuits, drawing Phasor diagram, electric power, and power factor.

Students are expected to use the scientific process skills including observing, searching for information, performing experiments, giving informed opinion, presenting information, interpreting information, making a conclusion, analyzing, explaining, and discussing. Students are also expected to acquire the ability to solve problems, to think, and to use technology. They will subsequently have knowledge and understanding and be able to apply it in everyday situations. The course is additionally aimed for students to demonstrate the following characteristics: being honest, having discipline, being dedicated for work, and having learning skills and skills to create innovation.

ST30249 Molecular Biology and Human Physiology

Students will **study** the following topics: perception and responses to stimuli in unicellular organisms and some vertebrates; components and functions of nerve cells; neurotransmission, comparison of structures and functions of brain and spinal cord; operation of somatic nervous system and autonomic nervous system; structures and functions of each sense organ; prevention to dangers affecting nervous system and sense organs; **human spare parts**; structure and functions of endocrine in human, types of important hormones produced by endocrine, system controlling hormones, differences between hormone and pheromone, examples of uses of hormones and pheromone in everyday life; movement of unicellular organisms, vertebrates and invertebrates; functions of human bones; types of joints; functions of different types of joints; characteristics and location of muscles; relationship between DNA, RNA and protein; biotechnology; genetic engineering; tissue culture; benefits of genetic engineering, impact of genetic engineering on society and environment; GMOs, timeline of principles about

organism evolution, importance of the study on organism evolution, mechanisms that cause evolution of living things, process of population change and knowledge application.

In this course, students will **use** scientific process and skills which include observation, data search, experiment, making informed judgement, data presentation, classification, data interpretation, making a conclusion, analysis, explanation, discussion, team working, and assessment. Students will **gain** knowledge, understanding, and abilities in problem solving, thinking and use of technology. Students will also be able to apply knowledge learned in everyday life. The following characteristics will **in addition** be enhanced: love for nation, religion and the kind, honesty, self-discipline, avidity for learning, self-sufficiency, dedication to work, pride in Thainess, public mindedness and AC gentleman.

ST30250 Scientific Aptitude and Common Course in Biology

Students will study the following topics: maintenance of equilibrium in human body and animal body by the respiratory system, excretion system, circulatory system, lymphatic system, and immunity system; inheritance of genetic material, genetic variation, mutation, biodiversity; hormone structure; positions, structure and functions of important glands in endocrine system; working mechanism of hormones; differences between hormone and pheromone, examples of benefits gained from hormones and pheromones related to everyday life; perception and responses to stimuli of unicellular organisms and vertebrates; types of nerve cells, neurotransmission; structures and functions of brain; comparison of somatic nervous system and automatic nervous system; structure and responsibilities of each sense organs; methods to prevent harms that can affect nervous system and sense organs; animals' movement in order to respond to different types of environment; structure and functions of bones, human muscle; DNA, RNA; structure, function and synthesis of genetic material, mutation, genetic engineering and its application; concepts and evolution of living things; human evolution from past to present; speciation; maintenance of cell equilibrium in living things; mechanics to maintain water equilibrium in plants; mechanics to control equilibrium of water and minerals; maintenance of equilibrium in human body and animal body.

In this course, students will use scientific process and skills which include observation, data search, experiment, making informed judgement, data presentation, classification, data

interpretation, making a conclusion, analysis, explanation, discussion, team working, and assessment. Students will gain knowledge, understanding, and abilities in problem solving, thinking and use of technology. Students will also be able to apply knowledge learned in everyday life. The following characteristics will in addition be enhanced: love for nation, religion and the kind, honesty, self-discipline, avidity for learning, self-sufficiency, dedication to work, pride in Thainess, public mindedness and AC gentleman.

ST30289 Biochemistry Laboratory and Microbiology

Study basic principles and personal practices that demonstrate awareness in safe lab practices for personal safety, other people's safety and environmental safety; present guidelines to solve problems when accidents occur; study use of proper equipment or tools to perform lab experiments and to measure different kinds of quantities; present a plan for lab experiment, conduct an experiment, and write a lab report; study biochemistry work and choose proper biochemistry software program for the analysis of experiment results; follow aseptic technique accurately step by step; study how to classify microbes from colonial morphology and cell morphology and how to detect microorganisms in food, water and soil. Study calculation to find the concentration of a solution and prepare the concentration of a solution as required; study the experiment and choose proper indicator for acid-base titration; study the experiment to extract caffeine from a substance sample by liquid-liquid extraction; study the experiment to find the melting points of solid samples; identify problems and present guidelines to solve problems found in daily life, work or industry by using knowledge in chemistry and biology. In this course, students will apply scientific process and various set of skills including critical thinking and problem-solving, creativity and innovation, collaboration teamwork and leadership. Students will gain knowledge, understanding, and scientific process skill and they will be able to apply knowledge learned to solve problems, overcome obstacles, and create their own innovation. Additionally, students are expected to have competencies in thinking, communicating and using technology efficiently. They should also be able to avoid risky behaviors that can negatively affect the interpersonal relationship. In terms of characters, the following will be fostered: discipline, avidity for learning, self-sufficiency, commitment to work, honesty and public-mindedness.

ST30290 Biochemistry Laboratory and Applied Microbiology

Study the process using fermentation to produce the products such as wine, liquor, beer, and pickled vegetables; explain and classify the production process and give examples of the fermentation process used in daily life. Study effects from antibiotic overuse on our bodies. Advise and choose appropriate antibiotics based on conditions of the person taking them. Study the principle of testing the properties of carbohydrates; understand the method to test for carbohydrates and experiment to analyze. Study the principle of testing the properties of proteins; understand the method to test for proteins and experiment to analyze. Study the principle of fat extraction; understand the extraction method and experiment to extract fat from samples. Study the principles to test the properties of fat, understand the testing method and experiment to analyze. Present a piece of work that is derived from problem-solving skill used in the situation or issue of a student's interest with the application of technology.

ST30295 Applied Health Science 1

Study the Describe evolution as a change in the inherited characteristics of a population over time through a process of natural selection. Variation can also be environmental, which affects a range of phenotypes. The impact of selective breeding on domesticated animals. Learn about structure of DNA. Understand that DNA is a polymer made up of two strands forming a double helix and that DNA is made from four different nucleotides, each consisting of a common sugar and phosphate group along with one of four different bases, these make up the sequence of these bases is the genetic code, also known as the genome.

Use the process of establishing knowledge and understanding, analytical process, and scientific skills and process which are observation, data exploration, experimentation, making judgments from data, data interpretation, and drawing conclusion to create knowledge, ideas, understanding, ability of knowledge communication, decision-making ability, and ability to apply knowledge to real-life situations along with having honesty, diligence, endeavor, public mind, proper values, and self-sufficiency.

ST30296 Applied Health Science 2

Study the process of genetic engineering and explore examples of genetic engineering in different cell types. Understand the benefits and risks of using genetic engineering in medical

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applications. Study the embryonic stem cells and that they can give rise to any cell type. Study functions of stem cells including adult stem cells and explain the benefits and risks of using stem cells in medical applications.

Use the process of establishing knowledge and understanding, analytical process, and scientific skills and process which are observation, data exploration, experimentation, making judgments from data, data interpretation, and drawing conclusion to create knowledge, ideas, understanding, ability of knowledge communication, decision-making ability, and ability to apply knowledge to real-life situations along with having honesty, diligence, endeavor, public mind, proper values, and self-sufficiency.