



COURSES DESCRIPTION

2018/2019



Grade 11 & 12

Name: _____

Class: _____ Stream: _____

Grade (10)

Option 3

Business 1

Introduction to business is a basic business course that introduces students to the world of business and is designed to acquaint students with the activities associated with business. Students will gather a basic understanding of general business, economics, entrepreneurship, business communications, business ethics, the government's role in business, marketing, and business finance. This course builds a foundation for further studies in business and helps students develop the business knowledge and skills they will need in their everyday lives. Students will not only understand the concepts, but apply their knowledge to situations and defend their actions/decisions/choices through the knowledge and skills acquired in this course. Overall, the course gives students a broad exposure to business operations and a solid background for additional business courses.

Creative Art

At IPS-J, students are exposed to a wide range of artistic genres and media in order to develop an aesthetic understanding of the arts that will continue throughout their lives. The arts program establishes link between subjects, cultures, and different areas of experience. Students are having the opportunity to express themselves and their ideas about the world they live in. Elective courses are offered to students to nurture their talents.

Option 4

Studio Art

In this course Students will be encouraged to explore media and think, talk and write about art. Through a variety of drawing and painting lessons, mostly based on perception, students will study line, shape and form, focusing on light, tonal drawing and linear and atmospheric perspective in black and white and color.

Electronic Design

The purpose of this course is to teach the students the skills and give them the tools to design simple analog and digital electronic circuits.

Grade (11)

Core II

Physics

This course provides an introduction to major topics in physics. The first semester is devoted to the study of mechanics: motion, forces, and energy. The second semester is devoted to the study of electricity, sound, and light. The course covers many of the same topics as Advanced Placement Physics 1, but with less emphasis on mathematical-problem solving and more on real-world application of physical principles. The course is for students who possess an interest in physics, basic algebra skills, and a willingness to think abstractly. Students may enroll in either Physics or Advanced Placement Physics 1, but not both.

Earth & Environmental Science

The general Earth and Environmental science course at IPS-J aims to prepare students with the knowledge and ability to apply scientific reasoning to a host of applications in their everyday lives now and in the future. This is accomplished by integrating the course content (disciplinary core ideas) in a way that has students utilizing the science and engineering practice skills of questioning, modeling, analyzing of data, constructing explanations and communicating this information to their peers. Students will explore Earth processes, ecosystems, natural resources, human impact, and the cycling of matter. Each semester will culminate in an engineering task that allows students to create solutions for resource challenges and ecological solutions. Students will be challenged and assessed through their ability to construct meaning from laboratory investigations, simulations and data analysis and to apply this understanding to new scenarios.

Option 4

Public Speaking

This course provides instruction and experience in preparation and delivery of speeches within a public setting and group discussion. Emphasis is on research, preparation, delivery, and evaluation of informative, persuasive, and special occasion public speaking. Upon completion, students should be able to prepare and deliver well-organized speeches and participate in group discussion with appropriate audiovisual support. Students should also demonstrate the speaking, listening, and interpersonal skills necessary to be effective communicators in academic settings, in the workplace, and in the community.

Business 2

This in-depth course of understanding business takes students into the diverse and ever-changing world of business and sets a solid foundation for our high school students who aim to pursue their careers in the field of business. The study skills aspects of the course cover organization, time management, improving reading for comprehension, note-taking skills and more in addition to the focus on in depth analysis of various business concepts in the areas of entrepreneurship, marketing, finance, and human resources. Students will be engaged in teamwork, presentations, computer-related activities, and current events while learning the topics of today's economy, business ownership, how to be a wise consumer. The knowledge obtained in this course provides a solid foundation for future college courses in Business College and is transferable to everyday life.

Product Design

This course is an introduction to the Delft Design Approach offering a model and a set of signature methods from Delft to teach you how to get from understanding the user in context to defining a meaningful design challenge and – in the end – deliver a great design! The course challenges students to experience the design process and reflect on their work.

<i>Option 5</i>		
<i>Pre-Calculus</i>	<i>Anatomy</i>	<i>Accounting I</i>
<p>This accelerated course covers the Algebra 2 Advanced content, but in greater depth. Additionally, Pre-Calculus topics such as a complete study of conic sections, polar coordinates, vectors, parametric equations, and introductions to limits and derivatives are also included to prepare students to take Calculus the following year. Students will be expected to solve higher order thinking problems and demonstrate procedural fluency in their responses.</p> <p>Topics covered in pre-calculus include trigonometric functions, logarithms, exponents, matrices and sequences.</p>	<p>This is an advanced course in biology that emphasizes the physiology (function), rather than the anatomy (structure), of the human body. The major systems of the body are studied by viewing graphic lms of human surgery, by performing several dissections, through readings from scientific journals and a college-level text, and through lectures and team research projects. Topics include cardiovascular diseases, joint repair and replacement, physical anthropology, nerve and brain function, imaging techniques, sense organs, and the history of medicine. Students study their own anatomy and physiology using noninvasive techniques such as electrocardiography. Laboratory exercises require students to work independently as well as cooperatively.</p>	<p>Accounting is the language of business and will be required of anyone aiming to attend a business school or pursue a major or minor in business in college. This course provides a good foundation for future success at the college level as well as many benefits for personal use. The course provides students with the basic knowledge of accounting procedures, including analyzing and journalizing business transactions, constructing worksheets, calculating and recording adjusting entries, preparing financial statements and analyzing them to conclude business performances. Special journals, subsidiary accounts and payroll reports and taxes will be introduced. Emphasis is placed on service businesses in grade 11 and merchandising businesses in grade 12.</p>

Grade (12)

Core III

Math for Business

Mathematics of Business is a course concentrating on the mathematics necessary to understand and make informed decisions related to personal finance. The mathematics in this course will include the applications of ratios, proportions, and percent in financial situations; applications of functions, their characteristics, their use in modeling and matrices for solving problems in financial situations; real-world applications including, but not limited to, floor plans, square footage, models of furniture arrangements, trip planning, and accident investigations; representations and models of data as tools in the decision making process of finance.

Calculus

Calculus completes a college curriculum in variable calculus. The course focuses on developing the student's understanding of the concepts of calculus and providing experience with its methods and applications. The themes of derivatives, integrals, limits, approximation and applications and modeling are used to present a cohesive whole in the study of calculus.

Core IV

Macro Economics

This course introduces economic analysis of aggregate employment, income, and prices. Topics include major schools of economic thought; aggregate supply and demand; economic measures, fluctuations, and growth; money and banking; stabilization techniques; and international trade. Upon completion, students should be able to evaluate national economic components, conditions, and alternatives for achieving socioeconomic goals. Both the courses of Microeconomics and Macroeconomics aims to provide students with theoretical and functional knowledge in economics to become informed consumers, producers and citizens in today's globalized world. Economics is the study of how individuals, businesses and governments. We relate economic theories and concepts to the current economic issues. The course will help students to acquire many life skills, and also in establishing a foundation for more advanced study of economics. By the end of the course, students will be able to understand introductory micro and macro-economic theories, solve basic problems, and use these techniques to think about a number of policy questions relevant to the operation of the real economy.

Sociology

Sociology will focus on group behavior and dynamics. How do groups work? How is social control maintained? The course will begin by giving the students an appreciation and understanding of social institutions found in all societies while also examining culture and society. Individual topics such as the family, group conformity and deviance, religion, and aging will be studied. Research gathering and the scientific method will be emphasized.

Option 6

Chemistry Honors

This course is a qualitative and quantitative introduction to the macroscopic chemical behavior of inorganic substances based on molecular structure. Extensive laboratory work introduces, reinforces, and extends theoretical topics covered via reading and lecture. The first semester is devoted to learning to recognize, explain, predict, and express chemical changes. Thermodynamic considerations in predicting chemical change are also covered, and the term concludes with a correlation of molecular structure to the chemical and physical behavior of pure substances. In the second semester, more attention is paid to the molecular level of reactions. Solution properties, reaction kinetics, equilibrium, and electrochemical processes are studied in detail. A short unit on nuclear reactions and related topics is also included. Chemistry Honors assumes a greater comfort level with applied algebra than Chemistry and requires a significant degree of independence. Students who have succeeded in previous science courses by spending significant time doing the maximum amount of work possible with frequent teacher intervention are likely to end the course very difficult and its time commitment excessive. Students will need to determine for themselves how many of the suggested homework problems (not collected) are necessary for them to gain facility with the concepts.

Entrepreneurship

This course concentrates on the process of starting a new business. Students will learn how to identify, assess and develop a business plan as well as how to find and evaluate business opportunities. It also covers different aspects of the financing of a new or expanding business. Some of the major topics covered are attracting seed capital and growth capital, valuing and pricing new ventures, financial analysis and forecasting, and going public. The objective of this course is to give the student hands-on, real world experience with business operations. Students need to use the course knowledge to develop their own business plan, create a new product or a service and perform complete marketing and financial forecast of their new venture.

Option 7

Debate

Debate is a one-semester introductory course that covers a variety of styles of public speaking and formal debate. Through research and practice, students will become familiar with these styles through instruction, research, and practice. Each unit will culminate in performance assignments that require students to demonstrate their abilities within the classroom setting. Opportunities to take their knowledge to competition at the local and state level may be made available to students as well through extracurricular programs.

Innovation & Digital Leadership

Is a high school level course that is appropriate for students who are interested in Digital Leadership. The major focus of this course is to empower students to become effective leaders, collaborators, motivators, and communicators. Students will be involved in designing process, researching and analysis, teamwork, communication methods, global and human impacts, engineering standards, and technical documentation. The course gives students the opportunity to develop skills and understanding of course concepts through activity-, project-, and problem-based learning used in combination with a teaming approach.

Option 8

*Biology H**

This course covers similar skills and topics as those taught in Biology, but at a faster pace, in greater detail, and with an emphasis on the molecular approach to biology. The course is designed for, and limited to, those students who have an intense curiosity about the natural world and life as a process. Due to the advanced and accelerated nature of the course, independent student learning and initiative are required. Students are expected to invest the time and energy necessary to synthesize complex and detailed processes.

*Physics H**

Physics H is intended to prepare students interested in fields of study that could require them to take engineering-level Physics in college. Such students are expected to have strong skills in algebraic and trigonometric problem solving. This course provides an introduction to the fundamental principles of Physics and how they apply to our daily lives. Emphasis is placed on developing experimental investigations to address a problem, the analysis and evaluation of data, development of conceptual understanding of Physics principles, and mathematical problem solving using 2nd year algebra and trigonometry. Topics addressed will include: Motion, forces, energy, momentum, rotational dynamics, wave behavior, sound, light/optics, electrostatics, and simple electrical circuits. Other topics may be studied, time permitting.

Accounting I

Accounting is the language of business and will be required of anyone aiming to attend a business school or pursue a major or minor in business in college. This course provides a good foundation for future success at the college level as well as many benefits for personal use. The course provides students with the basic knowledge of accounting procedures, including analyzing and journalizing business transactions, constructing worksheets, calculating and recording adjusting entries, preparing financial statements and analyzing them to conclude business performances. Special journals, subsidiary accounts and payroll reports and taxes will be introduced. Emphasis is placed on service businesses in grade 11 and merchandising businesses in grade 12.