

# English Semester Program



**2<sup>nd</sup> SEMESTER 2017 (July to December)**

**\*SUBJECTS AVAILABILITIES DEPENDING ON THE NUMBER OF STUDENTS SIGNED**

PUCPR was one of the first universities in Brazil to create and offer subjects taught entirely in English to its national and international learning community

As part of the university's international strategic plan, PUCPR intends to have by 2020 English courses taught in all its eight Schools, in all areas of knowledge.

Nowadays, the university has already implemented courses in seven Schools: Architecture and Design, Business, Communication and Arts, Life Sciences, Humanities and Education, Polytechnic and Law.

These courses allow international students to complete a full semester (30 ECTS) totally in English while they study Portuguese as a Foreign Language and prepare to expand their academic lives into courses taught solely in Portuguese, or even, to work as an intern in a Brazilian company through our Internship Programs.

PUCPR English Semester also offers international and local students the enriching opportunity to sit side by side to discuss topics and learn from a wide range of cultural perspectives, therefore, to expand their knowledge of the world.

## **BUSINESS SCHOOL**

### **BUSINESS PROGRAM**

#### **Business Statistics**

**5 ECTS**

Business statistics provides knowledge and skills to interpret and use statistical techniques in a variety of business applications. It aims at good decision making in uncertainty conditions supporting data analysis in many disciplines such as financial analysis, auditing, production and operations and marketing research. This course is based on practical applications and intense use of interpretation. The use of statistical package software and electronic spreadsheet is mandatory.

#### **Enterprise Architecture**

**5 ECTS**

Enterprise Architecture provide knowledge and skills to business and technology planning from a systems and process-level view to a more strategy-driven enterprise-level view. Enterprise Architecture promote and explain the emerging profession of EA. This course contains references to related academic research and industry best practices, as well potential future practices and the direction of this emerging profession. Using a case study the student will be able to identify, analyze and plan the capabilities to support the fusion between the Business Architecture and the Information Architecture to achieve organizational strategic long-term goals.

<b><u>Entrepreneurial Management</u></b>	<b>5 ECTS</b>
Business opportunity, creativity and entrepreneurial vision; education and development of entrepreneurs minds; the profile of the successful entrepreneur; planning, assessment and management tools of projects; labor supply and entrepreneurial initiative; policies and competitive strategies for emerging enterprises; agencies and institutions of support for the generation of innovative projects; development of business plans.	
<b><u>Human Resources Strategic Management</u></b>	<b>5 ECTS</b>
The course focuses on understanding the importance of management the human resources, to enable a comparison between human resources in Brazil and other countries.	
<b><u>Information Systems</u></b>	<b>5 ECTS</b>
This course will be conceptual and instrumental. It will focus exclusively on information systems as an instrument to help managers to translate and control business strategy. It is not an IT – Information Technology course.	
<b><u>Innovation and Knowledge Management</u></b>	<b>5 ECTS</b>
The knowledge economy; knowledge as an organizational resource; theoretical foundations of innovation and knowledge management; strategic aspects of information and competitive intelligence; knowledge management models and practices; innovation models and stages; best practices in innovation management; national and local systems of innovation; technology transfers, strategic alliances and innovation strategies; science, technology and innovation in Brazil; integrated approach to innovation and knowledge management.	
<b><u>Investment Analysis</u></b>	<b>5 ECTS</b>
The purpose and structure of financial markets; the history of investing; the regulation of the financial sector; the financial crisis; the psychology of investing; the instruments and markets of investing; evaluating risk and return.	
<b><u>Logistics</u></b>	<b>5 ECTS</b>
An overview of Integration and management of the supply chain; strategic and operational alignment; alignment of supply and demand; multimodality; inventory and warehousing management; customer service; compensated costs (trade-offs); information systems; policies and procedures; technology, machinery and equipment; organizational change.	
<b><u>Strategic Management</u></b>	<b>5 ECTS</b>
The course focuses on understanding the theoretical concepts and tools of strategic management in order to cope with dynamic forces and challenges from the environment. It deals with strategic management as an important approach to help organizations to respond to the demands of the environment seeking to improve organizational performance, competitiveness and sustainability in the long range as well as to fulfill their mission.	
<b><u>ACCOUNTING PROGRAM</u></b>	
<b><u>Valuation</u></b>	<b>5 ECTS</b>
A brief sketch of merger and acquisition (M&A) in Brazil and Its importance in the world; the most important M&A made in Brazil for the last 10 (ten) years; the historical background: first international investments in Brazil, the first Brazilian companies that invested in other countries; the valuation method mores used in brazil and the differences with valuation in other countries.	
<b><u>ECONOMICS PROGRAM</u></b>	
<b><u>Contemporary Brazilian Economy</u></b>	<b>5 ECTS</b>
Brazil overview; the State of Paraná overview; regional inequality in Brazil; macro policies to sustain growth; raising saving and investment; impediments to investment; promoting infrastructure development; achieving strong and sustainable growth; education and health care in Brazil; income distribution in Brazil; Brazil: what's next?	
<b><u>Geopolitics and International Business</u></b>	<b>5 ECTS</b>
Geopolitics and the international order; border conflicts and sovereignty; diplomacy and business; conciliation and regulation chambers; international regulatory organizations; international financial organizations; international cooperation; geopolitics and economic blocks; geopolitics scenario's analysis and formation; actors in contemporary geopolitical international scenarios.	

## **MARKETING PROGRAM**

### **Consumer Behavior**

**5 ECTS**

The main theories and concepts in consumer psychology and about exciting new findings to deepen the understanding of how and why people choose, use, and evaluate products and services the way they do. Involvement and Perception; Memory and Learning; Motivation, Affect and Values; The Self, Personality and Psychographics; Attitudes and Behavior; Consumer Persuasion and Behavior/Attitude Changes, Decision-Making; Cultural Influences on Consumer Behavior; Advanced Topics on Consumer Behavior: The Dark Side, Nonconscious consumer behavior and Consumer Neuroscience.

## **TOURISM PROGRAM**

### **Sustainability and Business**

**5 ECTS**

The concept of sustainability; the environmental dimension of sustainability; the social dimension of sustainability; the economic dimension of sustainability; sustainable SCM; innovation and sustainability; eco-efficiency; ecodesign; urban sustainability; indicators for sustainability; strategies for sustainability; the new era of business.

## **LAW SCHOOL**

### **Economic Law**

**3 ECTS**

To explore the interdisciplinary approaches between the law and the economy. To work with the concept of private initiative and state intervention/regulation in the economic domain.

### **Fundamentals of International Arbitration**

**3 ECTS**

This course will provide an introduction to the arbitration process focusing in Brazilian Law. Also will provide a study about the NY Convention and the Uncitral Model Law on international commercial arbitration, as well as about de IBA rules on international arbitration.

### **Human Rights**

**3 ECTS**

Liberal Rule of Law, Representative Democracy and Individual Rights. Welfare State, Social Democracy and Collective Rights. International Perspective on Democracy and Human Rights. International Protection of Human Rights. International Human Rights Instruments: Incorporation into Domestic law, the Brazilian Precedents. European Mechanisms for Fundamental Rights Protection. American Convention on Human Rights.

### **International Trade Law**

**3 ECTS**

This introductory course deals with structural aspects of the international trade law system, including the different municipal legal systems; the history of the international legal system; customary international law; treaty law and interpretation; the meaning and jurisprudence of international law statehood and recognition; international organizations such as the United Nations, the World Trade Organization, the IMF, World Bank, UNCTAD, UNCITRAL and ICSID as well as the relationship between the international legal system and domestic systems. In addition, the course will review the legal vehicles available to facilitate international dispute resolution methods for governments and business entities. Specific attention is paid to the dispute resolution mechanism in the World Trade Organization, the International Centre for Settling Investor-State Disputes and International Commercial Arbitration. Finally the course briefly considers the concept of 'Choice of Law' for international trade contracts and the recognition of foreign awards and judgements through municipal courts.

### **Practicing Law Across Civil and Common Law**

**6 ECTS**

Comprising four parts that altogether provide the students with a solid understanding of the differences and similarities of contractual theory and practice in Civil and Common Law (namely the U.S. legal environment), the lectures, materials and workshops of this course encompass, from a comparative perspective: (i) The essential features of the two traditions, including formation, sources, state structures, the making and the enforcement of the law, federalism, judicial systems (courts and judges), principles of law interpretation (the role of the constitution, certainty and equity, *stare decisis*, overruling, case system, court precedents, principles, statutes, codes, uses, mores and customs); (ii) The definition, sources, formation, classification and understanding of contracts, comprehending the principles of trust, good faith, fair dealing and the fiduciary obligations, the statute of fraud and the burden of proof, pre-contract liability, conditions of substance validity, types of contracts and types of clauses, express, implied and

standard terms (*boilerplate*), obligations, representations, covenants, warranties, and conditions precedent, exemption clauses and limitations of liability, liquidated damages and penalty clauses, general rules of Interpretation and the *parol evidence rule*, and termination; (iii) Fundamental legal skills regarding contractual practice: knowledge, communication, advising, planning and Designing, monitoring performance, drafting, reviewing and revising; (iv) The understanding of applied ethics in contractual practice: categorical and utilitarian approaches, dealing with pressing moral problems, ethical reasoning, and guidelines on how to deal with hard cases.

<b><u>Private International Law</u></b>	<b>3 ECTS</b>
Private International Law: Concept, goals and history. The Private International Law sources. Private International Law standards. Connection elements. Application of foreign law and conflict of laws. Public Order. International Procedural Law. Approval of foreign judgments. International Contracts. International Arbitration.	

## **POLYTECHNIC SCHOOL**

<b><u>CIVIL ENGINEERING PROGRAM</u></b>	
<b><u>Building Information Modeling</u></b>	<b>3 ECTS</b>
Building information Modeling, Object modeling, predecessor design technics and interoperability through IFC.	
<b><u>Physics II</u></b>	<b>3 ECTS</b>
Rotational motion. Oscillations. Mechanical waves. Sound. Fluids (hydrostatic and hydrodynamic). Temperature and heat. Thermal properties and process of heat transfer. Kinetic theory of gases. Energy in thermal process and first law of thermodynamics. Thermal machines and second law of thermodynamics.	
<b><u>ENVIRONMENTAL ENGINEERING PROGRAM</u></b>	
<b><u>Administration of Project Engineering and Entrepreneurship</u></b>	<b>3 ECTS</b>
Entrepreneurship and entrepreneurial process. Administration. Management of organizational functions in engineering projects. d. Strategic planning for engineering business.	
<b><u>COMPUTER SCIENCE PROGRAM</u></b>	
<b><u>Object Oriented Programming</u></b>	<b>4 ECTS</b>
Object-oriented abstractions, Dynamic Dispatching. Inheritance. Encapsulation. Classes. Generic Types. Debugging. Object Oriented Projects. Component libraries.	
<b><u>COMPUTER ENGINEERING PROGRAM</u></b>	
<b><u>Computer Architecture and Organization</u></b>	<b>5 ECTS</b>
Computer Organization: memory and central process units. Assembly language programming. Memory addressing modes and instruction set. Interruption and exception mechanisms. Buses, communication, interfaces and peripherals. RISC and CISC architectures. Pipeline. Memory Hierarchy.	
<b><u>CONTROL AND AUTOMATION ENGINEERING PROGRAM</u></b>	
<b><u>Intelligent Systems</u></b>	<b>5 ECTS</b>
Artificial intelligent, computational intelligence and natural computing concepts. Fundamentals and applications of evolutionary computing. Fundamentals and applications of swarm intelligence. Fundamentals and applications of fuzzy systems. Fundamentals and applications of artificial neural networks. Fundamentals of neuro-fuzzy systems. Emerging approaches in intelligent systems.	
<b><u>CHEMICAL ENGINEERING PROGRAM</u></b>	
<b><u>Biotechnology</u></b>	<b>5 ECTS</b>
Industrial Microbiology. Generic fermentation process. Biotechnological kinetic process parameters. Bioreactors. Recovery operations and bioproducts purification. Processes. Biotechnology in Chemicals industry.	

<b>General Chemistry</b>	<b>5 ECTS</b>
Atomic and quantum model. States and properties of matter. Periodic properties. Chemical bonding and intermolecular interactions. Molecular geometry. Inorganic functions. Stoichiometry. Redox.	
<b>Material Science</b>	<b>4 ECTS</b>
The subject focuses on the recognition and analysis of the main groups of materials (metals, polymers, ceramics and composites). At the end of the course, the students will have the competence to define the main groups of material relating their chemical properties with their physical and mechanical behavior	
<b>Nanotechnology</b>	<b>6 ECTS</b>
Introduction to the Nanotechnology basic concepts; Overview of Nanostructured and Nanomaterials classification; Preparation methods of commonly explored nanomaterials; Distinguished properties arising from nano-scaled materials; Nanostructured and nanomaterial characterization; Nanocomposites; Application of nanostructured materials, Introduction to sustainable nanotechnology.	
<b><u>INDUSTRIAL ENGINEERING PROGRAM</u></b>	
<b>Engineering Project Management</b>	<b>5 ECTS</b>
Students will learn about: General concepts and contextualization of engineering projects; Making an engineering project plan following the project management knowledge areas (integration, scope, time, cost) accordingly to the PMBoK (Project Management Body of Knowledge); Monitoring and Controlling engineering projects; Computational tools to help on engineering project management; Extent the engineering project plan to the other knowledge areas (risk, procurement, communications, human resources and quality). Closing projects. Engineering project management maturity concepts. Programs, portfolios and projects management.	

## **SCHOOL OF ARCHITECTURE AND DESIGN**

<b><u>ARCHITECTURE AND DESIGN PROGRAM</u></b>	
<b>Brazilian Interior Architecture Design</b>	<b>6 ECTS</b>
Concepts, principles and practice of recognition of interior and its design process architecture. Practical development of interior architecture design.	
<b><u>FASHION DESIGN PROGRAM</u></b>	
<b>Digital Photography</b>	<b>3 ECTS</b>
Essentially practical classes that seek to develop creative capacity beyond the mastery of expression and visual reproduction techniques. Students learn to handle professional photographic equipment in a fully manual mode. Development of technical skills and comprehension of the creative possibilities that Photography offers are a huge part of the program. The methodology follows the precepts of presenting theoretical content at first followed by practical work done by students under a proposed topic that leads all students to develop the connection between theory and practice, exercising creativity and visual expression.	
<b>Brazilian Crafts and Design</b>	<b>3 ECTS</b>
This course aims to give an introduction to Brazilian crafts and design. It will offer the opportunity to learn more about the importance of current revitalization processes of traditional crafts and its influence on contemporary Brazilian design, with main focus on fashion and product design. Beginning with the discussion of basic concepts about design and crafts, the course will then highlight some specific contemporary subjects in both areas. It will also focus on how designers collaborate with artisans and the legitimacy of such initiative in local communities.	
<b><u>DIGITAL DESIGN PROGRAM</u></b>	
<b>Universal Principles of Design</b>	<b>3 ECTS</b>
This subject is an overview of design principles and practices common to most design professions, to give students a foundation understanding of design rules, laws, and guidelines that they can use throughout their education and career pursuits. Students will learn the language of design, how to think like a designer, how to judge between good and bad design works, and where to go for additional resources of specialized design practice.	

## **SCHOOL OF COMMUNICATION AND ARTS**

<b><u>Communication and Brazilian Culture</u></b>	<b><u>3 ECTS</u></b>
History of Brazilian culture. Regional and popular aspects of culture in Brazil. The construction of Brazilian identity and multiple characteristics of Brazilian people. The contemporary Brazilian culture. Brazilian mass culture.	
<b><u>Creative Thinking</u></b>	<b><u>5 ECTS</u></b>
The creativity as an ability to generate ideas. The creative being and his individual and collective attitudes. The comprehension of the creative process and its techniques. The creative problem resolution and its incentives. Observation, perception and the understanding by using draws. The image and the study of the representation techniques. The importance of non-verbal languages of the contemporary culture.	
<b><u>Video Production</u></b>	<b><u>3 ECTS</u></b>
Historical aspects of the television language. Audiovisual language. Advertising in audiovisual formats. Image and sound as narrative construction. Structure and functioning of broadcasters and producers. Audiovisual production technologies. Planning, creation and production of advertising materials and audiovisual advertising. The audiovisual at technological convergence environment. Audiovisual platforms.	

## **SCHOOL OF EDUCATION AND HUMANITIES**

<b><u>Anthropology and Sociology of Art</u></b>	<b><u>5 ECTS</u></b>
Arts and social sciences. Social Sciences contributions to the analysis of art. Institutions, ideologies and artistic movements. Modern and contemporary approaches to art.	
<b><u>Intercultural Communication</u></b>	<b><u>5 ECTS</u></b>
Concepts and definitions of culture. Identification of the various cultural dimensions and its impact on a study abroad experience. Cultural identity. Intercultural developmental model. Culture chock and the process of adjustment to other cultures. Cultural diversity in teamwork and the role of intercultural communication inside the organizations.	
<b><u>Portuguese as a Foreign Language – (Students are placed on the most appropriate level after a placement test taken during Orientation session)</u></b>	<b><u>5 ECTS</u></b>
Upon successful completion of the course, the students should be able to: develop a strategy learning/recording vocabulary, be aware of some other learning strategies, use capitalization and punctuation correctly, learn some basic classroom language, introduce themselves and others, talk about countries, nationalities, habits, routines, personal details, jobs, likes and dislikes, possessions, leisure time activities, food and drink, requests, future plans, past experiences describe places, houses, people, make suggestions, ask for and give information, recognize and use verb tenses, modals, passives, recognize and use time expressions, articles, count/non-count nouns, demonstratives recognize and use parts of speech, recognize and use high-frequency words and expressions, read at sentence and paragraph level, read for comprehension, read stories for specific information, scan for details, listen for specific information, listen for main ideas, take part in role-plays and conversations brainstorm ideas, plan and outline a paragraph, write at sentence and paragraph level, write an informal letter, write a story, write about a process, make sentences using conjunctions, use data to write a paragraph.	

## **SCHOOL OF LIFE SCIENCES**

<b><u>Brazilian Cuisine</u></b>	<b><u>7 ECTS</u></b>
Study and characterization of Brazilian cuisine. Establishment of relations between the different regional characteristics. Development, construction and production of menus. Increase in culinary techniques involved in this process.	
<b><u>Human Physiology</u></b>	<b><u>6 ECTS</u></b>
Theoretical and practical study of physiological phenomena related to homeostasis, basic cellular processes, bioelectrogenesis of excitable cells, the cardiovascular system, the renal system, respiratory system, nervous system, the digestive system, the endocrine system and the reproductive system.	

<b><u>Immunology</u></b>	<b><u>6 ECTS</u></b>
Study and development of the components of the immune system, mechanisms of activation and control of innate and adaptive immune response. Study of the mechanisms of immune system response against pathogens. Transplantation immunology, the tumors of immunodeficiency, hypersensitivity and autoimmunity. Laboratory techniques in immunology.	
<b><u>Public Health</u></b>	<b><u>4 ECTS</u></b>
The subject of Public Health aims to offer an appropriate educational stimulus so the student can acquire the specific skills and competencies to develop: (i) a critical understanding of the health practice, focusing on families, as Public Health is discussed in Brazil (ii) work with emphasis on interpersonal skills that emphasizes; "qualified hearing," the care professional, bonding between patient and health care professional, longitudinal monitoring of patients and accountability for health epidemiological results, (iii) salaries related to daily practice, principles and tools for working with families through the development of intervention projects in diverse scenarios practices, focus on humanizing work, proactive and multidisciplinary.	
<b><u>Social skills: An introduction</u></b>	<b><u>6 ECTS</u></b>
Social skills' definition and classification; evaluation of initial repertoire of social skills, social skills' training and training evaluation; social skills application in different contexts. Relationship between social skills and psychological disorders. Current research in Social skills.	



**Office of International Relations**

Coordination for International Mobility

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