

**Semester Abroad Program:** Students may enroll in up to five courses per term (45 contact hours each = 3 US credits / 6 ECTS; 60 contact hours = 4 US credits / 8 ECTS), choosing from our six disciplinary tracts:

#### **Business & Marketing**

- BUS 330 Cross-Border Business Strategy
- BUS 350 Digital Marketing in Emerging Markets
- BUS 360 Business Innovation & Lean Startups
- BUS 420 Social Entrepreneurship in Latin America
- BUS 480 Data Analytics for Business

#### **Industrial Engineering**

- IE 330 Human Factors and Ergonomics
- IE 350 Industrial Innovation Lab
- IE 360 Sustainable Supply Chains in Latin America
- IE 370 Lean Manufacturing in Emerging Economies
- IE 420 Applied Data Analytics for Operations

#### **Biomedical Engineering**

- BME 330 Tropical Healthcare Innovations
- BME 340 Biomedical Data & Bioinformatics
- BME 350 Biomaterials & Device Design
- BME 420 Biomedical Startups & Regulatory Frameworks
- BME 470 Ethics and Global Health in Emerging Economies

#### **IT Engineering (Software, AI & Cybersecurity)**

- CS 340 Secure Software Development
- CS 350 Ethical Hacking & Cyber Defense
- CS 360 AI for Social Impact
- CS 370 Cloud Computing and Identity Management
- CS 420 Cybersecurity Policy and Risk
- CS 430 AI for Sustainable Business
- CS 480 Astrodynamics Without Math

#### **Psychology**

- PSY 340 Cross-Cultural Psychology
- PSY 350 Mental Health and Social Change
- PSY 360 Organizational Psychology and Wellbeing
- PSY 370 Psychology of Innovation and Creativity
- PSY 410 Global Public Health in Latin America
- PSY 415 Integrative and Holistic Health Approaches
- PSY 416 Blueprints for Thriving: Dimensions of Well-Being

#### **Latin American & Development Studies**

- LAS 330 Globalization, Environment and Human Development
- LAS 340 Environmental Sustainability and Development in Latin America
- LAS 350 Contemporary Latin American History
- LAS 360 Free Trade Agreements in Latin America
- LAS 370 Poverty, Economics and Development in Latin American
- LAS 380 Latin American Literature and Society

#### **Spanish Immersion Program**

1. SPAN-101 Basic 1 Spanish
2. SPAN-102 Basic 2 Spanish
3. SPAN-201 Intermediate 1 Spanish
4. SPAN-202 Intermediate 2 Spanish
5. SPAN-301 Advanced 1 Spanish
6. SPAN-302 Advanced 2 Spanish
7. SSP-304 Spanish for Specific Purposes (other SSP according to department needs)

| Disciplinary           | Code           | Course   | Credits  | Hours     | DESCRIPTION   |
|------------------------|----------------|--|----------|-----------|---|
| Biomedical Engineering | <b>BME 330</b> | <b>Tropical Healthcare Innovations</b>                 | <b>3</b> | <b>45</b> | Discover the unique challenges and opportunities of healthcare innovation in tropical and rural settings. Based on ULACIT's Biomedical Instrumentation course, this class explores the design and application of medical technologies suited to developing regions. Students engage in real case studies and field visits to rural clinics, learning how Costa Rican engineers and doctors implement telemedicine and point-of-care diagnostics in underserved areas. |
| Biomedical Engineering | <b>BME 340</b> | <b>Biomedical Data &amp; Bioinformatics</b>            | <b>3</b> | <b>45</b> | Dive into the world of biomedical data through an applied, project-based course that introduces bioinformatics principles using real datasets from public health sources. Students gain hands-on experience with biological databases, protein structure prediction, and genomic data analysis. Includes team-based design of an original application in biomedicine using current bioinformatics tools and algorithms.   |
| Biomedical Engineering | <b>BME 350</b> | <b>Biomaterials &amp; Device Design</b>                | <b>4</b> | <b>60</b> | Explore how materials interact with the human body and how biomedical devices are prototyped for therapeutic use. Adapted from ULACIT's courses in Biomaterials and Biomedical Design, this course includes practical workshops and collaboration with engineers from Costa Rica's free trade zone manufacturing hub. Students prototype functional components using simulation and design-thinking methods.  |
| Biomedical Engineering | <b>BME 420</b> | <b>Biomedical Startups &amp; Regulatory Frameworks</b> | <b>3</b> | <b>45</b> | Learn how biomedical innovations move from lab to market in regulated industries. This course draws from ULACIT's Biomedical Regulations curriculum and features expert panels with entrepreneurs and regulatory consultants. Topics include international standards (FDA, CE), clinical trials, intellectual property, and Costa Rica's regulatory ecosystem for medical devices.  |
| Biomedical Engineering | <b>BME 470</b> | <b>Ethics and Global Health in Emerging Economies</b>  | <b>3</b> | <b>45</b> | This interdisciplinary seminar explores the ethical challenges of delivering health services in low-resource environments. Students analyze case studies related to moral reasoning, equity, and public health interventions. The course fosters critical reflection on the role of engineers and health professionals in promoting sustainable and inclusive innovation in global health.  |
| Business & Marketing   | <b>BUS 330</b> | <b>Cross-Border Business Strategy</b>                  | <b>3</b> | <b>45</b> | Gain strategic insights into how businesses operate across borders in Latin America. This course combines regional business analysis with legal and policy frameworks that affect trade and investment. Students explore case studies of multinational companies operating in Costa Rica and collaborate on projects that simulate market entry and expansion strategies in emerging economies.   |

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| Business & Marketing                          | <b>BUS 350</b> | <b>Digital Marketing in Emerging Markets</b>    | 3 | 45 | Explore how digital strategies are reshaping business in Latin America. Based on ULACIT's E-commerce and Digital Marketing course, students learn to design campaigns using social media, SEO, and email automation tools. The course includes benchmarking real-world campaigns from Costa Rican startups and global brands operating in the region. Final projects involve consulting for a local SME to develop a data-driven digital strategy.  |
| Business & Marketing                          | <b>BUS 360</b> | <b>Business Innovation &amp; Lean Startups</b>  | 3 | 45 | Develop innovative solutions for underserved communities while learning the principles of lean startup methodology. Students work in teams to identify needs, validate business ideas, and build scalable models. Based on ULACIT's innovation and entrepreneurship courses, this hands-on program includes mentorship by local founders and participation in Costa Rica's startup ecosystem.   |
| Business & Marketing                          | <b>BUS 420</b> | <b>Social Entrepreneurship in Latin America</b> | 3 | 45 | Understand how business can be a tool for social impact. Students partner with local social ventures and non-profits to address real challenges through entrepreneurial initiatives. Inspired by ULACIT's Professional Experience and Social Engagement modules (TCU), this course provides students with tools for stakeholder analysis, impact measurement, and sustainable business design.  |
| Business & Marketing                          | <b>BUS 480</b> | <b>Data Analytics for Business</b>              | 4 | 60 | Master the fundamentals of data visualization and decision-making using Excel, Power BI, and real business datasets. Based on ULACIT's analytics and decision-making curriculum, students apply forecasting and scenario planning tools to marketing, finance, and operations problems. Includes hands-on simulations with business intelligence dashboards and a capstone project involving real company data.   |
| IT Engineering (Software, AI & Cybersecurity) | <b>CS 340</b>  | <b>Secure Software Development</b>              | 3 | 45 | Learn how to build robust, secure software systems from the ground up. This hands-on course introduces principles of secure coding, threat modeling, and vulnerability management, with real-world applications from emerging markets, it equips students with the skills to design secure, scalable, and maintainable code. Curriculum includes secure coding principles, software design patterns, unit testing, and refactoring using C# in Visual Studio. Students will build applications using object-oriented programming and analyze how software design choices impact security, flexibility, and performance. |

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| IT Engineering<br>(Software, AI & Cybersecurity) | CS 350 | <b>Ethical Hacking &amp; Cyber Defense</b>     | 4 | 60 | Simulate real-world cyberattacks and learn how to defend against them. Drawing from "Criptografía Aplicada" and "Hackeo Ético," this course allows students to simulate and analyze cyberattacks and countermeasures using international ethical hacking frameworks. Students learn penetration testing, vulnerability assessment, and real-time defense protocols. Lab-intensive and based on Latin America's cybersecurity context, this course provides critical skills in threat mitigation and secure systems.           |
| IT Engineering<br>(Software, AI & Cybersecurity) | CS 360 | <b>AI for Social Impact</b>                    | 3 | 45 | Artificial Intelligence is reshaping the world—this course explores how it can serve the public good. This interdisciplinary course explores machine learning applications in areas like public health, agriculture, and education. Students will work on real datasets and simulate AI-driven solutions with ethical implications in emerging economies. Projects are grounded in Costa Rican case studies, emphasizing the ethical and social dimensions of machine learning and intelligent systems in emerging economies. |
| IT Engineering<br>(Software, AI & Cybersecurity) | CS 370 | <b>Cloud Computing and Identity Management</b> | 3 | 45 | Master the foundations of cloud infrastructure and identity governance. This course covers the deployment of cloud-based solutions, access control protocols, and data integrity in distributed systems. Students will simulate cloud environments and identity frameworks aligned with GDPR and ISO/IEC 27001 standards, with examples from regional startups and public institutions.   |
| IT Engineering<br>(Software, AI & Cybersecurity) | CS 420 | <b>Cybersecurity Policy and Risk</b>           | 3 | 45 | Cybersecurity isn't just about technology—it's about governance, law, and resilience. This course explores the policymaking process, regulatory frameworks, and risk management strategies in Latin America and beyond. Students explore national and regional policy frameworks, evaluate recent case studies from Latin America, and simulate cyber crisis scenarios. The course develops students' ability to design governance strategies that align organizational risk with international compliance mandates.          |

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| IT Engineering<br>(Software, AI & Cybersecurity) | <b>CS 430</b> | <b>AI for Sustainable Business</b>                | 3 | 45 | This course examines how Artificial Intelligence (AI) can drive sustainable business practices aligned with Environmental, Social, and Governance (ESG) principles. Students explore the fundamentals of ESG frameworks, AI technologies, and their integration into corporate strategy to create long-term value. The course covers AI tools for ESG data measurement, reporting, and assurance, as well as applications in environmental monitoring, social impact assessment, and corporate governance. Through case studies, practical workshops, and a final project, students will design AI-powered strategies that promote sustainability, innovation, and ethical business transformation. |
| IT Engineering<br>(Software, AI & Cybersecurity) | <b>CS 480</b> | <b>Astrodynamics Without Math</b>                 | 3 | 45 | This course introduces the principles of orbital mechanics in a simplified, non-mathematical format, focusing on practical applications for spaceflight. Students learn how spacecraft achieve and maintain orbit, perform rendezvous and docking, and execute interplanetary transfers. Topics include ascent profiles, orbital alignment and phasing, docking procedures, reentry, transplanetary injection, trajectory corrections, and orbital insertion at destinations. Using simulation software such as Orbiter 2024, participants engage in hands-on exercises, culminating in a final orbital rescue mission that integrates all course concepts.   |
| Industrial Engineering                           | <b>IE 330</b> | <b>Human Factors and Ergonomics</b>               | 3 | 45 | Understand the critical role of ergonomics in industrial design and workplace safety. This course combines lectures with on-site analysis at production facilities in Costa Rica. Students apply ergonomic principles to improve productivity, design safer workstations, and adapt equipment to human capabilities in diverse working environments.  |
| Industrial Engineering                           | <b>IE 350</b> | <b>Industrial Innovation Lab</b>                  | 4 | 60 | Develop your entrepreneurial mindset through this lab-style course inspired by ULACIT's Professional Experience and New Venture Creation programs. Students form interdisciplinary teams to solve real industrial challenges, create prototypes, and pitch business models. Includes mentorship from startup incubators and industry mentors.   |
| Industrial Engineering                           | <b>IE 360</b> | <b>Sustainable Supply Chains in Latin America</b> | 3 | 45 | Explore how companies in emerging economies structure their supply chains to improve resilience, reduce environmental impact, and stay competitive in global markets. Based on ULACIT's Global Supply Chain Management course, this class includes technical visits to Costa Rican ports or logistics hubs to analyze sustainability practices in real-world operations. Students will design an optimization plan based on diagnosis and performance indicators.   |

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| Industrial Engineering      | <b>IE 370</b>  | <b>Lean Manufacturing in Emerging Economies</b>                      | 3 | 45 | Experience hands-on problem-solving in Costa Rica's vibrant manufacturing sector. This course adapts ULACIT's courses on Operations Management and Manufacturing Strategy to a project-based format, where students work alongside local industrial partners to identify inefficiencies and propose lean solutions using value stream mapping and waste reduction techniques.  |
| Industrial Engineering      | <b>IE 420</b>  | <b>Applied Data Analytics for Operations</b>                         | 3 | 45 | Master the fundamentals of data-driven decision-making in industrial operations. Drawing from ULACIT's Operations Research and Forecasting course, students use simulation tools and analytics software to evaluate inventory systems, production schedules, and logistics flows. Final projects involve modeling solutions for real companies operating in Latin America.   |
| LATAM & Development Studies | <b>LAS 330</b> | <b>Globalization, Environment and Human Development</b>              | 3 | 45 | To be an informed and responsible global citizen, students must be able to appreciate the various ways in which societies organize their political, social and economic relations, and the effect that all these different interactions have on cultural, environmental and socioeconomic variables. The course is designed to increase the capabilities of students to act with civic responsibility and global perspective to respond responsibly and effectively to the national, regional and global challenges. Students will gain an international and interdisciplinary perspective of global society and its challenges, improving their skills to critically and analytically address various global challenges associated with environmental geography, population and migration processes, coherence and cultural diversity, as well as the geopolitical framework, social and economic development of each sub-region. |
| LATAM & Development Studies | <b>LAS 340</b> | <b>Environmental Sustainability and Development in Latin America</b> | 3 | 45 | The course addresses the critical analysis of the challenges of development and environmental sustainability of the Latin American region aiming to develop proposals and innovative ideas to solve key problems. Students exercise creative thinking to understand the causes and consequences of our current development patterns in LATAM and the challenges they pose in order to discuss proposals for the improvement of environmental, social and economic conditions from the perspective of the sustainability of development.  |

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| LATAM & Development Studies | LAS 350 | <b>Contemporary Latin American History</b>                  | 3 | 45 | <p>In the course "Contemporary History of Latin America", students debate about the importance of identifying historical patterns of political, economic, cultural and social character at the current situation in the region, allowing them to build solid visions of a more prosperous and democratic future in the region. With the teacher's guidance, they analyze and evaluate the impact of different stages with their own complexities in the historical evolution of the region and developing critical positions when studying the course readings as well as develop explanations that allow us to understand the socio-political, economic and cultural evolution of Latin America, emphasizing the stark contrasts that characterize the region.</p>   |
| LATAM & Development Studies | LAS 360 | <b>Free Trade Agreements in Latin America</b>               | 3 | 45 | <p>In the course students develop the competence to advise decision makers regarding the promotion of free trade in general and especially in the region, taking into account lessons learned in Latin America and the Caribbean regarding Free Trade Agreements and their negotiation. To do this, the student critically analyzes regimes economic integration of Latin America and the Caribbean, research and analyze several cases of regional economic integration, as well as lessons learned on integration for the future improvement of intra and extra-regional trade. This course allows the student to promote global free trade from the comprehensive understanding of the different dynamics of regional integration, thus sustaining based on their knowledge and research proposals for making investment decisions and economic development.</p> |
| LATAM & Development Studies | LAS 370 | <b>Poverty, Economics and Development in Latin American</b> | 3 | 45 | <p>The course enables students to contribute to socio economic development of the region through the analysis and understanding of the complex phenomenon of poverty in Latin America, in order to research and propose data driven policies aimed at developmental socioeconomic goals and promoting sustainable human development in the region.</p>  |

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| LATAM & Development Studies | LAS 380 | Latin American Literature and Society | 3 | 45 | <p>This course explores how Latin American literature both reflects and shapes the region's socio-political and cultural evolution. Students examine canonical works—from pre-Columbian texts and colonial chronicles to modernist, magical realist, and contemporary voices, in dialogue with their historical and social contexts. Through critical reading, debate, and comparative analysis, the course emphasizes how literature engages with themes such as identity, colonialism, revolution, democracy, and social justice.</p> <p>Students will develop analytical and interpretive skills to assess the role of literature in understanding Latin American societies, connecting past traditions to current challenges of globalization, inequality, and cultural change. The course combines textual analysis with experiential learning in Costa Rica's cultural institutions, offering opportunities for applied research and creative presentation formats. Designed for study abroad undergraduates, the course fosters interdisciplinary engagement across literature, history, and political studies, and positions literature as a lens for interpreting the region's development and future directions.</p> |
| Health & Psychology         | PSY 340 | Cross-Cultural Psychology             | 4 | 60 | <p>This course explores human behavior across cultures, with a strong emphasis on indigenous communities in Costa Rica. Students gain deep insights into the psychological impacts of cultural differences through a combination of academic theory and real-world experiences. Fieldwork includes community-based research in local indigenous territories and rural settings, providing a unique opportunity to apply cross-cultural psychology principles to real contexts. Course content integrates public health policy, intercultural communication, community psychology, and social psychology.</p>   |
| Health & Psychology         | PSY 350 | Mental Health and Social Change       | 3 | 45 | <p>Students analyze the social determinants of mental health in Latin America, focusing on the challenges faced by vulnerable populations such as migrants and at-risk youth. Drawing from social psychology, developmental psychology, and community engagement practices, the course emphasizes applied research, case analysis, and the design of social intervention strategies. This is an ideal course for students interested in public health, human development, and social impact.</p>   |

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| Health & Psychology | PSY 360 | <b>Organizational Psychology and Wellbeing</b>    | 3 | 45 | This course explores the intersection of psychology and the workplace. Students examine motivation, emotional intelligence, leadership, and workplace behavior, drawing from organizational psychology and behavioral science. Through local case studies and on-site workshops with Costa Rican organizations, students analyze real business scenarios and recommend interventions to improve employee well-being, productivity, and organizational culture.          |
| Health & Psychology | PSY 370 | <b>Psychology of Innovation and Creativity</b>    | 3 | 45 | Designed for students interested in the psychology of problem-solving and creativity, this course combines theory with practice in a collaborative environment. Students explore how individuals and teams develop creative solutions, manage innovation, and overcome resistance to change. The course draws from innovation management, positive psychology, and leadership models to explore how psychological principles drive change in organizations and society. |
| Health & Psychology | PSY 410 | <b>Global Public Health in Latin America</b>      | 3 | 45 | Examine public health systems and policies in Latin America, with a focus on Costa Rica's universal healthcare model. Analyze epidemiological trends, health equity, and challenges like infectious diseases, nutrition, and environmental health. Includes site visits to clinics and public health NGOs.  |
| Health & Psychology | PSY 415 | <b>Integrative and Holistic Health Approaches</b> | 3 | 45 | Explore non-traditional medical systems such as herbal medicine, acupuncture, mindfulness, and energy healing. Analyze Costa Rica's use of integrative practices within its healthcare system, with optional field visits to local practitioners.   |

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| Health & Psychology | PSY 416 | <b>Blueprints for Thriving:<br/>Dimensions of Well-Being</b> | 4 | 60 | <p>This course examines how young adults can sustain well-being and build healthy lifestyles they can enjoy throughout their lives. Drawing on research and meta-analyses of the factors that lead to flourishing, students explore nine dimensions of healthy living: physical health, psychological and emotional wellbeing, educational attainment, ethical behavior, relationships, constructive engagement, executive functioning and life skills, civic engagement, and spirituality.</p> <p>The course emphasizes both academic research and “me-search,” encouraging students to critically analyze their own practices, reflect on strengths and challenges, and design strategies to support healthier lifestyles. Through presentations, guided discussions, and the development of a Healthy Lifestyle Plan, students engage in applied self-diagnostics while also considering the broader social and cultural influences on health.</p> <p>This is a highly interactive and experiential course, ideal for students interested in psychology, public health, personal development, and education. Participants will strengthen competencies such as self-awareness, empathy, teamwork, leadership, and problem-solving while connecting theory with practice in the Costa Rican context.</p> |
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