

### **MAJOR DIPLOMAS IN**

- Software Engineering
- Information Systems
- Information Technology

In order to graduate from the Systems Engineering Undergraduate Program, students must prove that they have completed the intermediate level of English, French, German, Italian or Portuguese by submitting a language proficiency certificate issued by any of the institutes recognized by the University of Lima.













# **SYSTEMS ENGINEERING**

Faculty of Engineering and Architecture

Graduate students from the Systems Engineering Undergraduate Program are prepared to face the challenges and demands of organizations in a globalized context. They propose, implement, validate and manage innovative solutions based on information technologies with a comprehensive approach, allowing organizations to satisfy their needs and achieve their strategic objectives.



## **SYSTEMS ENGINEERING** Faculty of Engineering and Architecture

| LEVEL I  | LEVEL II                          | LEVEL III                              | LEVEL IV  | LEVEL V                             | LEVEL VI                   | LEVEL VII                                     | LEVEL VIII                    | LEVEL IX                                      | LEVEL X                            |
|--|-----------------------------------|--|---|-------------------------------------|----------------------------|---|-------------------------------|---|------------------------------------|
| Basic Mathematics                                    | 5<br>Calculus I                   | Fundamentals of<br>Systems Engineering | 3<br>Statistics and<br>Probability I              | Statistics and<br>Probability II    | 3 Operations<br>Research I | Simulation                                    | Research Proposal<br>Workshop | Research<br>Seminar I                         | Research<br>Seminar II             |
| Research<br>Methodologies                            | 3 Economics and Business          | 4<br>Calculus II                       | 4<br>Calculus III                                 | Systems Modeling and Integration    | Financial Management       | Operations<br>Management                      | Risk Management               | 3 Strategic Planning                          | Systems Control and Audit          |
| Personal and<br>Social Development                   | 3<br>Linear Algebra               | Informatics<br>for Management          | Accounting<br>Management                          | Cost of<br>Operations               | Legislation and Ethics     | Evaluation of Systems<br>Engineering Projects | 3 Digital Marketing           | Project<br>Management                         | Human Capital<br>Management        |
| Language and<br>Communication I                      | 5<br>Topics in Philosophy         | Discrete Structures                    | Business<br>Organization                          | Development of<br>Managerial Skills | Startup Workshop           | Business Intelligence<br>Systems              | 3 ERP Systems                 | Advanced Information Systems                  | Enterprise<br>Architecture         |
| Globalization and<br>Contemporary<br>Peruvian Issues | Language and<br>Communication II  | Introduction to Programming            | Object-Oriented Programming                       | Business Process<br>Engineering     | Data Engineering           | Database<br>Management                        | Decision Support Systems      | Predictive Data Analytics                     | Big Data<br>Analytics              |
|  | Social and Political<br>Processes | 4<br>Physics I                         | Fundamentals of<br>Electricity and<br>Electronics | Data Structures and Algorithms      | Programming<br>Languages   | Software<br>Engineering I                     | 3 Machine Learning            | 3 Quality Assurance                           | Software<br>Architecture           |
|  |                                   | Computer<br>Architecture               | Operating Systems                                 | Human-Computer<br>Interaction       | Computer<br>Networks       | Web Programming                               | Software<br>Engineering II    | Information Technology<br>Services Management | Information<br>Technology Security |
|  |                                   |  |   | Data<br>Communication               |                            | Networks Seminar                              | Mobile Programming            | Information Technology Architecture           | Cybersecurity                      |
|  |                                   |  |   | Internet of Things                  |                            | Cloud Computing                               | Data Center Architecture      | 4   |                                    |

| Mandatory credits 20 Mandatory credits 20 Mandatory c | edits 21 Mandatory credits 22 Mandato | atory credits 20 Mandatory credits 20 Mandatory credi | ts 18 Mandatory credits 16 | Mandatory credits 16 Mandatory credits 10 |
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Mandatory subjects of the School of Liberal Arts Mandatory subjects of the Systems Engineering Undergraduate Program Elective subjects of the Systems Engineering Undergraduate Program Subjects in common among the undergraduate programs of the Faculty\*



No. of Credits Type of Credit **Credit Summary** 40 Mandatory Liberal Arts 143 Faculty Mandatory 22 Elective Total Elective Subjects 205 **Total Credits** 

