



# Commercial Software Engineering with concentration in Design and Architecture

## Year 1

### > First semester

Logic  
Programming 1  
Operating Systems 1  
Software Development 1  
Database 1  
Discrete Mathematics  
Calculus 1  
Communication 1

### > Second semester

Linear Algebra  
Programming 2  
Database 2  
Software Development 2  
Operating Systems 2  
Communication 2  
History of Software Development

## Year 2

### > Third semester

Programming 3  
Software Quality Engineering 1  
Calculus 2  
Software Development 3  
Computer Networks 1  
Software Quality Engineering 2  
Statistics  
Writing and Composition 1

### > Fourth semester

Programming 4  
Algorithms 1  
Software Development 4  
Computer Networks 2  
Software Quality Engineering 3  
Software Quality Engineering 4  
Writing and Composition 2  
Ethics and Interculturality Perspectives

## Year 3

### > Fifth semester

System Programming  
Algorithms 2  
Software Development 5  
Unix Administration  
Unix Software Development 1  
Programming Languages

### > Sixth semester

Software Development Management 1  
Human-Computer Interaction Design  
Software Development 6  
Web Development  
Asynchronous Programming  
Social Issues and Professional Practice

## Year 4

### > Seventh semester

Software Development Management 2  
Software Development Research Projects 1  
Software Development Research Projects 2  
Mobile Applications Development  
Systems Integration  
System Scalability

### > Eighth semester

Machine Learning  
Software Development Research Project 3  
Technical Documentation  
Software Development Research Project 4  
Technological Device Interaction  
Cloud Development  
Management and Leadership



# English for Specific Purposes (ESP) for Software Engineers

The program combines training in intercultural communication skills, English for Business, and English for Software Engineering.

## Year 1

### > Primer semestre

ESP 1: Beginning English for Software Engineers I

Lab. M2L2 – Lab. M3L1 – Lab. M3L2

### > Segundo semestre

ESP 2: Beginning English for Software Engineers II

Lab. M4L1 – Lab. M4L2 –  
Lab. M5L2 – Lab. M6

## Year 2

### > Tercer semestre

ESP 3: Business English

Lab. M7- Lab. M9

### > Cuarto semestre

ESP 4: English for Software Engineering I

ESP 5: Interview Preparation & Written Communication I

Lab M10

## Year 3

### > Quinto semestre

ESP 6: English for Software Engineering II

Lab. M13- Lab. M14

### > Sexto semestre

Lab. M16- Lab. M17 - Lab. M18- Lab. M19

## Year 4

### > Séptimo semestre

ESL 7: Interview Preparation & Written Communication II

### > Octavo semestre

For initial placement in the program, all students must complete a placement test, administered by the Admissions Department, before their first semester at the University. Based on their results, they will be assigned to Level 1 or Level 2 of the program.

\*Asynchronous practice labs for students.