

# **Software Engineering**

## **II**

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**David Camilo Delgado Arias**  
**Ingeniero de Sistemas y Computación**  
**[dcdelgadoa@unal.edu.co](mailto:dcdelgadoa@unal.edu.co)**  
**Universidad Nacional de Colombia**



# Topics

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- ☐ **Course Overview**
- ☐ **Project Description**
- ☐ **Homework**



# Course Overview



# Who am I?

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- ☐ **Systems and Computing Engineer from UN**
- ☐ **Web and Mobile Developer**
- ☐ **Excellent communication skills and leadership**
- ☐ **Entrepreneur**



# Experience

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- ☐ **Developer in the Web Group of the Faculty**
- ☐ **Teacher Assistant of SW2 for 3 semesters**
- ☐ **High School teacher from 8th to 11th Grade**
- ☐ **Java EE Developer and Server Admin**
- ☐ **Self Employed**
  - ☐ **Apps Development**
  - ☐ **Websites creation and maintenance**
  - ☐ **Artists strategy**



# About ColSWE

Colectivo de Investigación en Ingeniería de Software

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- ☐ **Software Lovers**
- ☐ **Software Development Methodologies (Especially Agile)**
- ☐ **Web and Apps Development Focus at the moment**
- ☐ **Software Testing and Quality**
- ☐ **Software Evolution and Maintenance**



# **Software Engineering I**

## **Focus**

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- ☐ **Requirements Engineering**
- ☐ **Software Design**
- ☐ **Software Diagrams**
- ☐ **Software Development Basics (IDE, Frameworks, etc)**
- ☐ **Methodologies (Classic and Agile)**



# **Software Engineering II**

## **Focus**

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- ☐ **Agile practices and methods**
- ☐ **Peopleware - Teamwork and Project management**
- ☐ **Software Development using a Web Approach**
- ☐ **Modern Software Engineering concepts and tooling**
- ☐ **Design Patterns**



**Why this focus?**



- ☐ **Web and Mobile Development are essential for businesses today**
- ☐ **Soft Skills reinforcement**
- ☐ **Teamwork is everything**
- ☐ **It's not about the code language, it's about solving problems**



# Course Goals



- ☐ Distinguish clearly between software processes based on classic models and agile methods.
- ☐ Identify the basic concepts related to Web development and the way Web 2.0 applications work on a real environment including common Cloud solutions.
- ☐ Remember and Reinforce the basic teamwork abilities and core values needed to work on Software Development in a real environment.
- ☐ **Apply the main concepts of modern Software Engineering in practice by developing a real Web Application with nowadays industry technologies, using professional supporting tools and following a defined agile process model.**



# Way of Working



- ☐ **Lectures (Two per Week)**
- ☐ **Course Project - (Sprints and Presentations)**
- ☐ **Quizzes (Zero or More)**
- ☐ **Assignments**
- ☐ **Practices**
- ☐ **Bonuses**



# Grading



- |   |            |
|---|------------|
| <input type="checkbox"/> <b>Presentations</b>                         | <b>10%</b> |
| <input type="checkbox"/> <b>Quizzes / Assignments / Participation</b> | <b>30%</b> |
| <input type="checkbox"/> <b>Product (Main Project)</b>                | <b>60%</b> |
| <input type="checkbox"/> <b>First project evaluation</b>              | <b>15%</b> |
| <input type="checkbox"/> <b>Second project evaluation</b>             | <b>15%</b> |
| <input type="checkbox"/> <b>Iterations</b>                            | <b>30%</b> |
| <input type="checkbox"/> <b>Bonuses!</b>                              |            |



# Course Resources

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**sw220172**



**is2unal@gmail.com - [SW2-XX]**



**<https://sites.google.com/site/sw220172/>**



# Project Overview



# **Brainstorming (Lean Startup Oriented)**

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- ☐ **Think about a problem, involving a certain population in a determinate topic**
- ☐ **Think how to solve it manually and try do to a little simulation**
- ☐ **Think if a technology solution would help to implement the idea**



# UN Projects

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- ☐ **Provided by the Faculty**
- ☐ **Must be well documented (Specially in terms of code - Comments, Message Commits, etc)**
- ☐ **Real product owner - Stakeholders**





Scrum



Web App



Deployment and Testing



Git



# Rules

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- ☐ **Five people teams**
- ☐ **The sprint's dates are fixed for all teams**
- ☐ **Each sprint has a grade**
- ☐ **Individual contributions to the project are going to be evaluated**



# **Project Minimum Requirements**

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- 1. Basic Forms**
- 2. Login (Devise one First and Then Social Networks One)**
- 3. Background Jobs**
- 4. Mailing**



# Project Minimum Requirements

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- 5. File Uploader
- 6. Document Generation (PDFs only)
- 7. Google Maps
- 8. Charts Visualization



# Teacher Assistants





**David Julian Guzman Cardenas**

**[djguzmanc@unal.edu.co](mailto:djguzmanc@unal.edu.co)**

**Estudiante Ingeniería de Sistemas y Computación**

**Universidad Nacional de Colombia**

**Laura Paola Cerón Martinez**

**[lpceronm@unal.edu.co](mailto:lpceronm@unal.edu.co)**

**Estudiante Ingeniería de Sistemas y Computación**

**Universidad Nacional de Colombia**





# **Homework - First Steps**

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- 1. Slack registration**
- 2. Slack Profile Customization**
- 3. Teams Creation**
- 4. Teams Naming**
- 5. First Brainstorming Session - Minimum 2 consensus ideas**