BOARD INFINITY

COURSE 3 OF 3 · AGILE DEVELOPMENT EXCELLENCE SPECIALIZATION

Continuous Integration (CI) Insight for Agile Development

Full course syllabus - every module, video lesson, reading and assignment, from your first CI pipeline to secure Continuous Delivery.

Board Infinity
Instructor · Offered on Coursera

3	26	12	1 week
Modules	Video lessons	Assignments	At 10 hours a week

INSIDE THE COURSE

01	Fundamentals of Continuous Integration (CI)	4 hours to complete
02	Advanced CI Techniques	4 hours to complete
03	CI in Practice	4 hours to complete

Enroll on Coursera

https://www.coursera.org/learn/continuous-integration-ci-insight-for-agile-development

01 ABOUT THE COURSE

From first pipeline to secure delivery.

Continuous Integration (CI) Insight for Agile Development is a practical guide to the CI practices that make Agile teams faster and their products more reliable. Across three modules you learn how CI fits into Agile workflows, configure pipelines with tools like Jenkins, Travis CI and CircleCI, and move on to multiple branches, Continuous Delivery and pipeline security.

Everything is delivered through short video lectures, readings and graded quizzes - 26 videos, 9 readings and 12 assignments in all. The course is at intermediate level: a basic understanding of software development is all you need to start.

WHO IT'S FOR

Software developers
Integrating code frequently and catching problems before they reach main.

Testers & QA engineers
Automating unit, integration and functional tests inside the pipeline.

DevOps enthusiasts
Building, securing and scaling CI/CD pipelines for real projects.

Agile team leads
Speeding up delivery without compromising quality or security.

WHAT YOU'LL LEARN

01 **Define the role of CI in Agile** — Module 1
Define the role and benefits of Continuous Integration (CI) in Agile development workflows

02 **Configure CI pipelines** — Modules 1-2
Configure CI pipelines using appropriate tools to automate code integration, testing, and deployment processes

03 **Integrate automated testing** — Module 1
Integrate testing frameworks to automate unit, integration, and functional test execution within CI pipelines

04 **Evaluate pipeline health** — Modules 2-3
Evaluate the performance, security, and scalability of CI pipelines to ensure stability in Agile projects

02 SYLLABUS

Three modules, one delivery pipeline.

1 week to complete at 10 hours a week. Flexible schedule - learn at your own pace.

01 Fundamentals of Continuous Integration (CI)

What CI is, pipeline setup and automated testing

4 hours
9 videos

BY THE END OF THIS MODULE YOU CAN

- ✓ Explain what CI is, its role in Agile development and its benefits for teams
- ✓ Describe the components of a CI pipeline and how to configure it well
- ✓ Choose CI tools - Jenkins, Travis CI and CircleCI - for your project
- ✓ Write and integrate unit, integration and functional tests, and report results

CONTENTS: 9 videos (58 min) · 3 readings (90 min) · 4 assignments (105 min) · 1 plugin (5 min)

TOPICS: Introduction to Continuous Integration · Setting Up a CI Pipeline · Automating Testing in CI · Quick Course Check-In (plugin)

You'll leave with: a solid foundation in CI practices - pipeline components, the right tools and automated tests - that you can apply in your own projects.

02 Advanced CI Techniques

Multiple branches, Continuous Delivery and pipeline security

4 hours
9 videos

BY THE END OF THIS MODULE YOU CAN

- ✓ Manage CI for feature branches and merge code automatically
- ✓ Handle merge conflicts in CI pipelines
- ✓ Move from CI to CD: automate deployment and set up stable CD pipelines
- ✓ Secure CI/CD pipelines with best practices and secret management

CONTENTS: 9 videos (55 min) · 3 readings (90 min) · 4 assignments (105 min)

TOPICS: CI for Multiple Development Branches · Continuous Delivery (CD) and CI · Securing CI Pipelines

You'll leave with: the skills to run CI across many branches, extend it into Continuous Delivery, and keep the whole pipeline secure.

03

CI in Practice

Case studies, troubleshooting and the future of CI

4 hours
8 videos

BY THE END OF THIS MODULE YOU CAN

- ✓ Learn from CI in large-scale Agile teams and fast-paced environments
- ✓ Fix common CI issues and debug pipeline failures efficiently
- ✓ Continuously improve the performance of your CI pipelines
- ✓ Prepare your pipeline for emerging trends, including AI in CI

CONTENTS 8 videos (45 min) · 3 readings (90 min) · 4 assignments (105 min)

TOPICS Real-World CI Examples | Troubleshooting CI Pipelines | Future of CI in Agile

You'll leave with: the confidence to tackle practical CI challenges in real Agile projects, and to adapt your pipeline as the practice evolves.

03 TOOLS & SKILLS

The themes that run through the course.

The CI pipeline
Core practice

Frequent, automated code integration: build, test and report on every change.

In this course: Module 1 sets up the pipeline; modules 2 and 3 extend and harden it.

Jenkins, Travis CI & CircleCI
CI tools

The industry-standard tools for configuring and running CI pipelines.

In this course: Compared in module 1 so you can choose the right one for your team.

Test automation
Quality

Unit, integration and functional tests that run on every commit.

In this course: Writing tests, integrating them, and monitoring and reporting results.

Continuous Delivery & security
CI/CD

Automated deployment, stable CD pipelines, and secrets kept out of the code.

In this course: Module 2 covers CD, security best practices and secret management.

SKILLS YOU LEAVE WITH

CI foundations
- Continuous integration
- Agile software development
- CI pipeline configuration
- Jenkins

Testing & quality
- Test automation
- Unit, integration & functional tests
- Test result reporting
- Debugging CI failures

Delivery & security
- Continuous delivery
- CI/CD
- Branch & merge management
- Secret management

04 CERTIFICATE & CAREER

Finish with a shareable certificate.

Add it to LinkedIn
Add this credential to your LinkedIn profile, resume, or CV.

Share it anywhere
Share it on social media and in your performance review.

Earned, not attended
Awarded on completion of the graded quizzes and assessments in all three modules.

Course 3 of 3
Part of the Agile Development Excellence Specialization by Board Infinity.

ROLES THE COURSE DISCUSSES

DevOps Engineer · Build & Release Engineer · QA Automation Engineer · Software Developer · Site Reliability Engineer · Agile Team Lead

Board Infinity

Instructor · Offered on Coursera

Intermediate level · Taught in English · 12 assignments · Flexible schedule

Ready to ship with confidence?

Enrollment, lessons, grading and the certificate all happen on Coursera.

Enroll on Coursera

Course page: coursera.org/learn/continuous-integration-ci-insight-for-agile-development

Want a coach alongside the course?

Board Infinity 1:1 coaching is a separate, optional Board Infinity offering - it is not part of the Coursera course. Details: https://www.boardinfinity.com/career-coaching/

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