

{EPITECH}

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Course Catalogue
2026-2027

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Modules list

DIT

- T-PRE-500 – Python Seminar – 2 ECTS
- T-WEB-500 – Web Seminar – 4 ECTS
- T-WEB-501 – Job Board – 4 ECTS
- T-ENT-500 – Portfolio – 5 ECTS
- T-JAV-500 – Java Seminar – 4 ECTS
- T-JAV-501 – Video Game – 5 ECTS
- T-CEN-500 – Digital transformation – 4 ECTS
- T-NSA-500 – Devops Seminar – 2 ECTS
- T-DOP-501 – Devops Popeye – 2 ECTS
- T-DOP-502 – MyMarvin – 2 ECTS
- T-FLE-500 - French language – 2 ECTS
- T-PRO-500 - Professional Project – 5 ECTS
- T-CAP-500 - Capstone – 15 ECTS

DIT Advanced

- I-DEV-700 – Web Seminar – 5 ECTS
- I-DEV-701 – Trinity 1 Devops – 6 ECTS
- I-DIT-700 – Digital Transformation – 6 ECTS
- I-DEV-702 – Trinity 2 Web development – 6 ECTS
- I-DEV-801 – Trinity 3 Application development – 6 ECTS
- I-IOT-801-IOT – Smart Trash Bin – 6 ECTS
- I-DAT-801 – AI Zoidberg – 6 ECTS
- I-NSA-801 – Cybersecurity – 6 ECTS
- I-FLE-700 - French language – 2 ECTS
- I-CAP-700 - Capstone – 4 ECTS

INTRODUCTION

Epitech has been a leading French institution renowned since 1999 for its unique educational model, designed to transform students into high-level IT professionals. Unlike traditional academic environments, Epitech focuses on **project-based learning** and **peer-to-peer collaboration**, preparing students for the fast-paced reality of the tech industry. "*Learning by doing*" and "*learning how to learn*" are the core pillars of our pedagogy.

Epitech's pedagogy is not about memorizing theory for an exam. Instead, progress is measured through the **validation of practical competencies** acquired during technical projects.

The validation of ECTS is confirmed by validating competencies, and not by having a minimum mark.

There are 2 types of assessments:

- If the module is a **seminar** – The method of validation is by continuous assessment. One or more associated skills can be validated via a series of successful exercises.
- If the module is only **1 project** – One member of the pedagogical team will review it at the end to see if the competencies linked to the project are well acquired. It includes an oral, a presentation, a project review, and a code review. The project is validated (and thus, the associated ECTS) if the student validates 50% of the set of skills linked to the project.

Each module consists of one or several projects with specific technical requirements. Your grade reflects your ability to apply technical concepts to solve real-world problems. Each module includes mandatory sessions to attend, such as:

- The Kick-off: 30 min session where the pedagogical team explains the objectives of the project.
- A Bootstrap: A 2-hour session where students practice and dive deep into the new technical content of the project.
- Follow-ups: A weekly 30 min check-in of the project progress.
- Delivery: An assessment done for a 1-project module, explained above.

Note to International Students: This system rewards autonomy, curiosity, and persistence. Your success depends on your ability to iterate on your code and collaborate with your peers to overcome technical challenges.

There are 2 types of programs available:

- DIT – Discover IT: Open to students who have none or a little knowledge of programming and IT, available for 1 or 2 semesters.
- DIT Advanced – Discover IT Advanced: Open to students with > 2 years of programming.

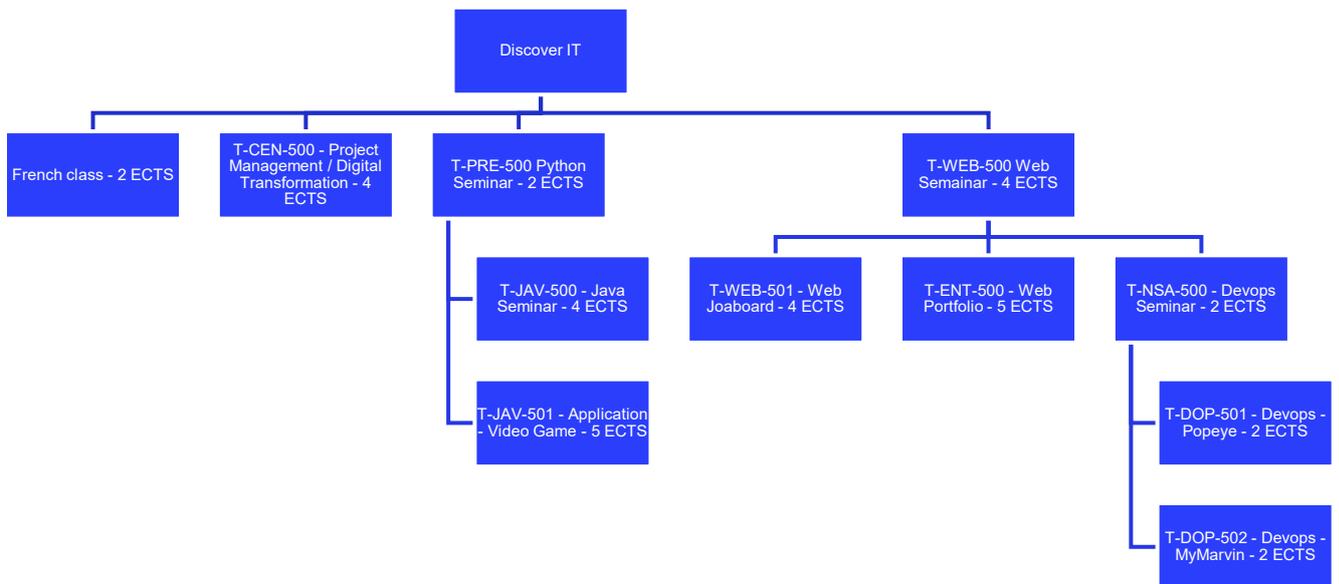
DIT – Discover IT

One Semester

36 credits available

Main Topics

- Web
- Software Development
- Devops
- Application development
- Project Management / Digital transformation
- Video game / Graphical programming



T-PRE-500 – Python Seminar

ECTS	2
Type	Mandatory
Theme	Software – Python Seminar
Duration	5 days – 40H
Size of group	1
Prerequisites	none
Objectives	<ul style="list-style-type: none"> - Learn basic programming logic - Debugging - Discovering IDE - Variables, Conditions, Loops, Functions, Syntax, etc. - Libraries
Content	Extra step (or stirrup) before the swimming pools, for students who would not have done any (or very little) computing before. This pool helps to level and homogenize students before the "real" start of the curriculum. To focus as much as possible on programming logic, the pool will be in interpreted Python. The aim is to have enough knowledge and skills (logic, variables, conditions, loops, functions, syntax, vocabulary, environment) to start the web pools that follow (without actually doing the web).
Name of the person in charge	Pierre COMPAGNON

- T-WEB-500 – Web Seminar

ECTS	4
Type	Mandatory
Theme	Web Seminar
Duration	80 hours – 10 days
Size of group	1
Prerequisites	none
Objectives	<ul style="list-style-type: none"> - Learn the basic of web programming languages, development - Understand the basic principles of web development - Discovering the back-end/front-end difference - Discover how to use a database - Basic use of Github - Use of Linux
Content	10 days of daily exercises + mini projects will guide the learners to discover some usual tools for web development, such as HTML, CSS, JS, PHP, AJAX
Name of the person in charge	Pierre COMPAGNON

- **T-WEB-501** – JobBoard

ECTS	4
Type	Mandatory
Theme	Web JobBoard
Duration	2 weeks – 80H
Size of group	2
Prerequisites	T-WEB-500
Objectives	JobBoard Project - This project aims at realizing a full-stack website to store and display an online job advertisement board
Content	Web-dev, HTML, CSS, JS, PHP, Ajax, Github, prod, Databases, API, CRUD, SQL,
Name of the person in charge	Pierre Compagnon

- **T-ENT-500** – Portfolio

ECTS	5
Type	Elective
Theme	Web - Portfolio
Duration	5 Weeks – but 15 days development – 120 hours
Size of group	1
Prerequisites	T-WEB-500
Objectives	Create a digital presentation portfolio that showcases your talents and best achievements to the public, such as potential employers. Tools and language free to use, up to the student.
Content	<ul style="list-style-type: none"> – web development – showcase – written expression – storytelling – reflexivity – documentation – self assessment – content management – hosting & deployment – job search -Transversal skills
Name of the person in charge	Pierre Compagnon

- **T-JAV-500** – Java Seminar

ECTS	4
Type	Mandatory
Theme	Application development – Java Seminar
Duration	11 days – 88 hours
Size of group	1
Prerequisites	T-PRE-500
Objectives	Discover Java programming language applied to basic application development.
Content	<p>“Pool” course. 11 days of exercises + mini projects will guide the learners to discover some usual tools for app development, such as java programming language, its libraires and frameworks.</p> <ul style="list-style-type: none"> - Application development, - Object oriented programing - Design patterns - GUI / UI / UX
Name of the person in charge	Pierre Compagnon

- **T-JAV-501** – Video Game

ECTS	5
Type	Elective
Theme	Application development – Video Game
Duration	3 weeks – 120H hours
Size of group	2
Prerequisites	T-JAV-500
Objectives	Develop a game on a basic 2D grid, using the OOP principles and the Java language. Groups can choose to focus on a single game genre and exploit it to the fullest, or they can combine several genres to create a coherent gameplay experience. As long as they use Object-Oriented Programming (OOP) concepts intelligently, anything is possible.
Content	<ul style="list-style-type: none"> - Application development, - Object oriented programing - Design patterns - GUI / UI / UX - Video game logic - Integrations of assets - Libraries
Name of the person in charge	Pierre Compagnon

- **T-CEN-500** – Digital Transformation

ECTS	4
Type	Elective
Theme	Project management – Digital transformation
Duration	8 Weeks – 80 hours (10H / Week estimation)
Size of group	2
Prerequisites	none
Objectives	As team leader of an imaginary revolutionary product, provide all the needed steps to develop it, from prototyping to release, including project management of the developer team, and much more.
Content	<ul style="list-style-type: none"> - Proof of concept - UI/UX - Piloting project management - Project planning - Gantt / Agile tools introduction - Personas / Interviews - Resources management - Risk management - Budget handling - Communication skills
Name of the person in charge	Pierre Compagnon

- **T-NSA-500** – Devops Seminar

ECTS	2
Type	Elective
Theme	Devops Seminar
Duration	1 Week – 40H
Size of group	1
Prerequisites	T-WEB-500
Objectives	“Pool” seminar to discover Devops intensively – 5 days of daily activities and exercises
Content	<ul style="list-style-type: none"> - Deployment - Versioning - Ansible - Virtualization - Docker - Virtual Machine - SSH - OS Management - MySQL

	<ul style="list-style-type: none"> - PhpMyAdmin - Configuring SSL / Firewall / API - Scripting
Name of the person in charge	Pierre Compagnon

- [T-DOP-501](#) – Devops Popeye

ECTS	2
Type	Elective
Theme	Devops - Popeye
Duration	1 Week – 40H hours
Size of group	1
Prerequisites	T-NSA-500
Objectives	Master the basics of containerizing applications. You must containerize and define the deployment of a simple web poll application, composed of five elements. You must create some Docker images, respecting the provided specifications, and link and run them all together using Docker Compose – Project Popeye
Content	<ul style="list-style-type: none"> - Mastering Docker and Devops - Containerization - YAML - Docker
Name of the person in charge	Pierre Compagnon

- [T-DOP-502](#) – My Marvin

ECTS	2
Type	Devops - MyMarvin
Theme	Elective
Duration	1 Week – 40 hours
Size of group	2
Prerequisites	T-DOP-501
Objectives	Project My Marvin - Setup the cornerstone of the Devops chain: the Continuous Integration & Continuous Delivery Pipeline. Use configuration as code to describe your wanted configurations in just one single file. Turn in a YAML file containing all the required configurations and use the job domain specific language to create elements
Content	<ul style="list-style-type: none"> - Automation - CI/CD - Pipelines - Testing

	<ul style="list-style-type: none">- Configuration as code- Jenkins- Github
Name of the person in charge	Pierre Compagnon

- French language

ECTS	2
Type	Mandatory
Theme	Language skills
Duration	1 semester – 2 hours / week
Size of group	1
Prerequisites	none
Objectives	Validate A1 in French language
Content	Basic words and sentences from everyday life
Name of the person in charge	Jérémy Carbonneaux

Full Year

60 credits available

Content:

- DIT Semester 1 (above)
- Semester 2 including 30 credits based on:
 - o Professional project (potentially an internship) – 5 credits per month done
 - o Technical side projects are based on themes of the first semester. 6 credits per technical projects (projects eligible by the student based on all specialties available on the document)
 - o Personal projects (ECTS to estimate depending on the project workload)
 - o Capstone – 15 ECTS

DIT Advanced – Discover IT – Advanced

Semester 1 / Fall

30 credits available

I-DEV-700 – Web Seminar

ECTS	5
Type	Mandatory
Theme	Web Seminar
Duration	3 weeks – 120H
Size of group	3
Prerequisites	None
Objectives	Immersion into the pedagogy of Epitech, and series of exercises to do every 3 days. Create a web platform for a fictional client from scratch.
Content	<ul style="list-style-type: none"> - functional programming - design thinking - APIs - Devops - Digital transformation - mobile applications - web development - security - databases - SQL.
Name of the person in charge	Pierre Compagnon

I-DEV-701 – Trinity 1 - Devops

ECTS	6
Type	Mandatory
Theme	Devops – Trinity 1
Duration	6 weeks – 150H
Size of group	3
Prerequisites	None
Objectives	You will learn how to design and implement continuous integration and continuous deployment (CI/CD) pipelines, containerize applications for multiple environments, and automate testing and deployments. By applying Devops practices to a real-world project, you'll gain the mindset and technical skills that companies expect from modern software engineers.
Content	<ul style="list-style-type: none"> - Understand and apply the Devops methodology

	<ul style="list-style-type: none"> - Design and implement a CI/CD pipeline for web and mobile applications - Containerize applications using Docker and manage multiple environments (dev/prod) - Configure and use GitLab CI/CD runners for automated workflows - Integrate unit tests and quality checks into deployment processes - Automate deployments to ensure zero-downtime delivery - Apply security best practices in Devops workflows - Document architecture, environments, and deployment pipelines
Name of the person in charge	Pierre Compagnon

I-DIT-700 – Digital transformation

ECTS	6
Type	Mandatory
Theme	Digital Transformation
Duration	13 Weeks – 140 Hours
Size of group	3
Prerequisites	None
Objectives	Simulating a customized IT development project, students work in groups to find and develop the technical solution that best meets the client's needs.
Content	Resistance to change, product acceptance, web development, UX/UI, mockups, documentation, digital transformation, interviews, personas
Name of the person in charge	Pierre Compagnon

I-DEV-702 – Trinity 2 – Web Development

ECTS	6
Type	Mandatory
Theme	Web – Trinity 2
Duration	7 Weeks – 150 hours
Size of group	3
Prerequisites	none
Objectives	Full stack development module, as part of the creation of an e-commerce website. Deliver maintainable, testable and professionally presented full stack web solution, document a robust back-end architecture and API, design, implement and document an intuitive user interface providing a good UX, Develop software components to deliver value to stakeholders.

Content	Database management, design, unit testing, product management, back-end and front-end, open-source technologies, API, UI/UX, data security, login, JSON, Web Token, KPI Dashboard, digital transformation, interviews, personas.
Name of the person in charge	Pierre Compagnon

French language

ECTS	2
Type	Elective
Theme	Language skills
Duration	1 semester – 2 hours / week
Size of group	1
Prerequisites	none
Objectives	Validate A1 in French language
Content	Basic words and sentences from everyday life
Name of the person in charge	Jérémy Carbonneaux

Capstone

ECTS	4
Type	Mandatory
Theme	Free tech project
Duration	1 semester – 100H
Size of group	1 to 3
Prerequisites	none
Objectives	Create an innovative tech project that solves a real-world issue of your choice
Content	Tech dev, project management, product management, soft skills
Name of the person in charge	Pierre Compagnon

Semester 2 / Summer

30 credits available

I-DEV-801 – Trinity 3 – Application development

ECTS	6
Type	Mandatory
Theme	Application development – Trinity 3
Duration	8 Weeks – 150hours
Size of group	3
Prerequisites	none
Objectives	<p>To boost competitiveness, a retail company needs your services to develop solutions to achieve several goals. You are tasked to develop two applications:</p> <ul style="list-style-type: none"> - a web application to optimize product management, supervise the sales and facilitate decision-making. - a mobile application to improve the final customer's experience, simplify its purchasing process and enhance its satisfaction. <p>To be more agile and efficient, you decide to implement the Devops philosophy early in these two development phases.</p>
Content	API Integration, Authentication; Design Patterns; OOP; Camera; User Interface; User experience.
Name of the person in charge	Pierre Compagnon

I-IOT-801 – IOT Smart Trash Bin

ECTS	6
Type	Mandatory
Theme	IOT – Smart trash bin
Duration	8 Weeks - 150
Size of group	3
Prerequisites	None
Objectives	<p>Creation of a system combining IoT and augmented reality to simulate and optimize a fictional public service in the city. A city wants to rebuild its waste system, true pain point for the inhabitants. To convince the mayor, you must demonstrate a fully functional prototype of connected trash cans loaded with various sensors (light, tilt, ...), to an AR application that overlays information on a smartphone camera feed.</p>
Content	IoT, VR, AR, Arduino, Unity, Smart city
Name of the person in charge	Pierre Compagnon

I-DAT-801 – AI Zoidberg

ECTS	6
Type	Mandatory
Theme	AI – Data - Zoidberg
Duration	8 weeks – 150 hours
Size of group	3
Prerequisites	none
Objectives	Given some datasets containing a plethora of X-ray images, you will use various machine learning procedures (train-validation-test, cross validation, ...), tune your algorithms and document your data-scientist work to deliver a precious tool to help the medical staff.
Content	AI, algorithms, documentation, machine learning, data visualization, data science, image recognition, use of external libraries, unit testing, data mining
Name of the person in charge	Pierre Compagnon

I-NSA-801 - Cybersecurity

ECTS	6
Type	Mandatory
Theme	Cybersecurity - CIA
Duration	8 Weeks – 150 hours
Size of group	3
Prerequisites	None
Objectives	A company called you because the previous (possibly unqualified) system administrator rage quit. You must investigate, scavenge and get administrator privileges on the existing infrastructure. Then find the leaks, secure the machines, add new services.
Content	Security, Hacking, Investigation, exploitation, bug hunting, patch, sysadmin, devops, virtualization
Name of the person in charge	Devops

French language

ECTS	2
Type	Elective
Theme	Language skills
Duration	1 semester – 2 hours / week
Size of group	1
Prerequisites	none
Objectives	Validate A1 in French language
Content	Basic words and sentences from everyday life
Name of the person in charge	Jérémy Carbonneaux

Capstone

ECTS	4
Type	Mandatory
Theme	Free tech project
Duration	1 semester – 100H
Size of group	1 to 3
Prerequisites	none
Objectives	Create an innovative tech project answering a real problematic of your choice
Content	Tech dev, project management, product management, soft skills
Name of the person in charge	Pierre Compagnon

Full Year

Content:

- DIT Semester 1 + Semester 2
- Free project (Capstone) 15 ECTS