

# AI ASSISTED PROGRAMMING

## MODULE INTRODUCTION

AIAP Module | Atlantic Technological University



## WELCOME TO THE FUTURE

*This module is your launchpad into the next generation of software development. We'll explore how to partner with AI to build better software, faster.*

### IN THIS MODULE, YOU WILL:

- Master AI tools like GitHub Copilot.
- Boost your coding productivity and creativity.
- Learn to write and debug with AI assistance.

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## CONTACT INFORMATION

*For all module-related inquiries, please contact me via email.*

## COMMUNICATION

-  Email: [daniel.cregg@atu.ie](mailto:daniel.cregg@atu.ie)

# ENROL IN MODULE ON MOODLE

## STEP-BY-STEP ENROLLMENT:

1. Go to <https://vlegalwaymayo.atu.ie/>
2. Search for module **10720**
3. Click on **AI ASSISTED PROGRAMMING**
4. Find your group (A, B, or C)
5. Click **Enrol button**
5. Enter the appropriate password:

Group A  
**groupa**

Group B  
**groupb**

Group C

groupc

# MODULE STRUCTURE



## DURATION

- 13 Weeks total
- This is **Week 1**
- No lab in Week 1



## WEEKLY SCHEDULE

- 2 hour lecture per group
- 2 hours lab per group
- Check: [timetables.atu.ie](http://timetables.atu.ie)

## MODULE LEARNING OUTCOMES

Upon completion of this module, you will be able to:



- **1. Identify and evaluate** the capabilities of various AI powered coding tools, including code generation, completion, and debugging assistants
- **2. Integrate AI-based tools** into a practical software development workflow, demonstrating their use in real-world coding scenarios
- **3. Critically analyse** the benefits and limitations of AI coding assistance, considering code quality, over-reliance, and potential biases
- **4. Explore emerging trends** in the field of AI-assisted programming

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## MODULE SYLLABUS

*You will find a **live syllabus** at the top of the module Moodle page.*

### KEY INFORMATION:

-  Detailed week-by-week syllabus breakdown
-  Updated regularly throughout the module



# ASSESSMENT OVERVIEW

Week Due	Assessment Type	Grade Portion
Week 7	MCQ1	30%
Week 12	MCQ2	30%
Week 13	Project	40%

# ASSESSMENT DETAILS



## MCQ ASSESSMENTS

- Sequential Multiple choice questions
- Based on previous lectures and labs
- **Study tip:** Use Google NotebookLM to generate practice questions



## FINAL PROJECT

- Application in language of your choice
- Use AI tools to assist development
- Must incorporate AI technology
- Follow detailed project brief

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## EFFORT & EXPECTATIONS

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Credit Module

100-125

Hours Required

13

Weeks Duration

***Self-directed learning*** will be the main source of learning in this module.

# ESSENTIAL TOOLS & RESOURCES



## DEVELOPMENT TOOLS

- **GitHub:** Repository storage
- **Codespaces:** Free VM in the cloud
- **GitHub Copilot:** AI programming assistant
- **CLI Tools:** Command line interfaces







## AI TOOLS

- Code generation assistants
- Debugging companions
- Documentation generators
- Code completion tools

## ACTION ITEMS - TO DO

### BEFORE NEXT CLASS:

-  **Sign up for GitHub Student Developer Pack**
  - Free access to premium development tools
-  **Change your GitHub username to your actual name**
  - Makes collaboration and grading easier
-  **Enroll in the Moodle module**
  - Access all module materials and announcements
-  **Review the live syllabus**
  - Understand the weekly progression

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## LOOKING AHEAD



### WHAT'S COMING NEXT

- Deep dive into AI-assisted programming concepts
- Hands-on experience with GitHub Copilot
- Practical coding sessions with AI tools
- Building real applications with AI assistance

*Get ready to revolutionize how you write code with the power of AI!*

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## QUESTIONS & DISCUSSION

### ANY QUESTIONS ABOUT:

- Module structure and expectations?
- Assessment methods and timeline?
- Tools and resources needed?
- Enrollment or technical issues?

*Remember: This module is about learning to work **with** AI, not being replaced by it!*

# THANK YOU!

## WELCOME TO AI-ASSISTED PROGRAMMING

[← Back to Module Index](#)

[→ Next Lecture: Introduction to AI-Assisted Programming](#)

Speaker notes