

Creative Computing

Full-Time | English

Focus Areas

Interface Design, Experience Design and Development for Web, Mobile, Games and Virtual Reality

Bachelor



Studying Creative Computing

You want to shape the digital future? The human-computer interface is at the centre of the digital transformation. This bachelor degree programme provides you with the necessary skills for planning, designing and programming these interfaces and allows you to combine technical programming knowledge with creative expertise in User Interface Design, Game Design, Web Technologies, Mobile Programming, and Augmented & Virtual Reality.

Study Content

The curriculum gives you a broad qualification profile in computer science and the basics of media design as well as the social science methods necessary for user-centred design.

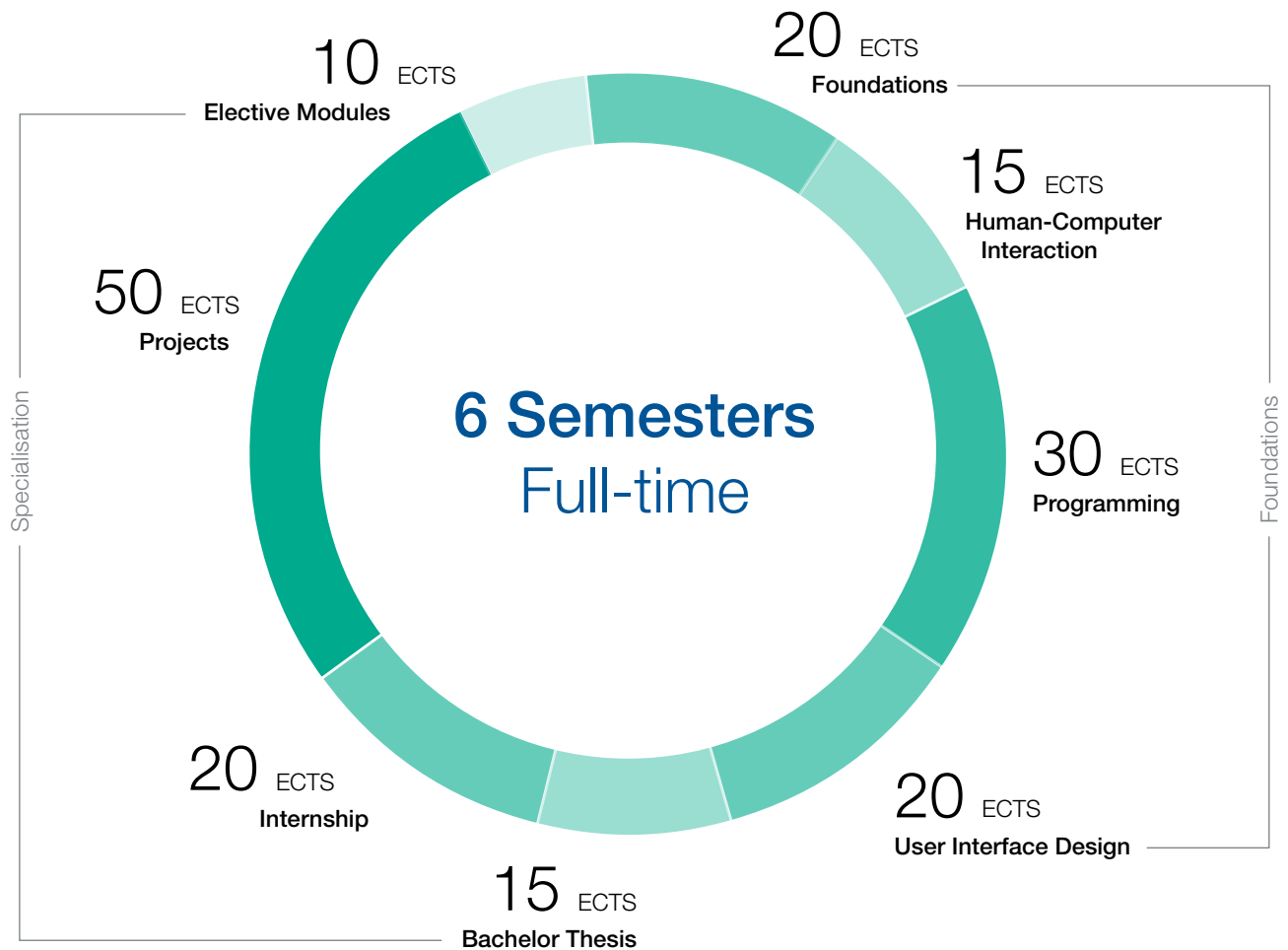
Focus Areas

- **Programming:** You acquire fundamental programming skills on the basis of the scripting language JavaScript. Building on this, you learn a high-level language for native programming on smartphones. Subsequently, the programming language C# is taught and used in the development of Augmented and Virtual Reality applications on the platform Unity.
- **Human-computer interaction:** The curriculum includes essential components of the human-centred design cycle such as user research, prototyping and evaluation. Furthermore, you learn how to develop smart devices and to equip existing objects with computing features.
- **User interface design:** You acquire the fundamental principles of graphic design for interactive screen media and deepen your knowledge of web, mobile and Augmented & Virtual Reality in a media-specific manner.

Top Career Opportunities

Once you have completed this sound scientific training, numerous professional options in various sectors will be open to you. Graduates are well-equipped for jobs such as:

- Web designer and programmer
- Multimedia designer
- Digital artist
- User interface designer
- Front-end developer
- Full stack developer
- Game designer
- Game developer
- Design engineer
- Developer mobile and web
- 3D application engineer



Information and Application



Academic degree

Bachelor of Science in Engineering (BSc)

Study places/year

35

Duration

6 semesters

Academic Director

FH-Prof. Dipl.-Ing. Dr. Markus Seidl, Bakk.



Application

apply.fhstp.ac.at

Admission dates & requirements

fhstp.ac.at/bcc



Information

St. Pölten University of Applied Sciences
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Campus & Study Center (GSC)
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About the Study Programme

Creative Code Labs

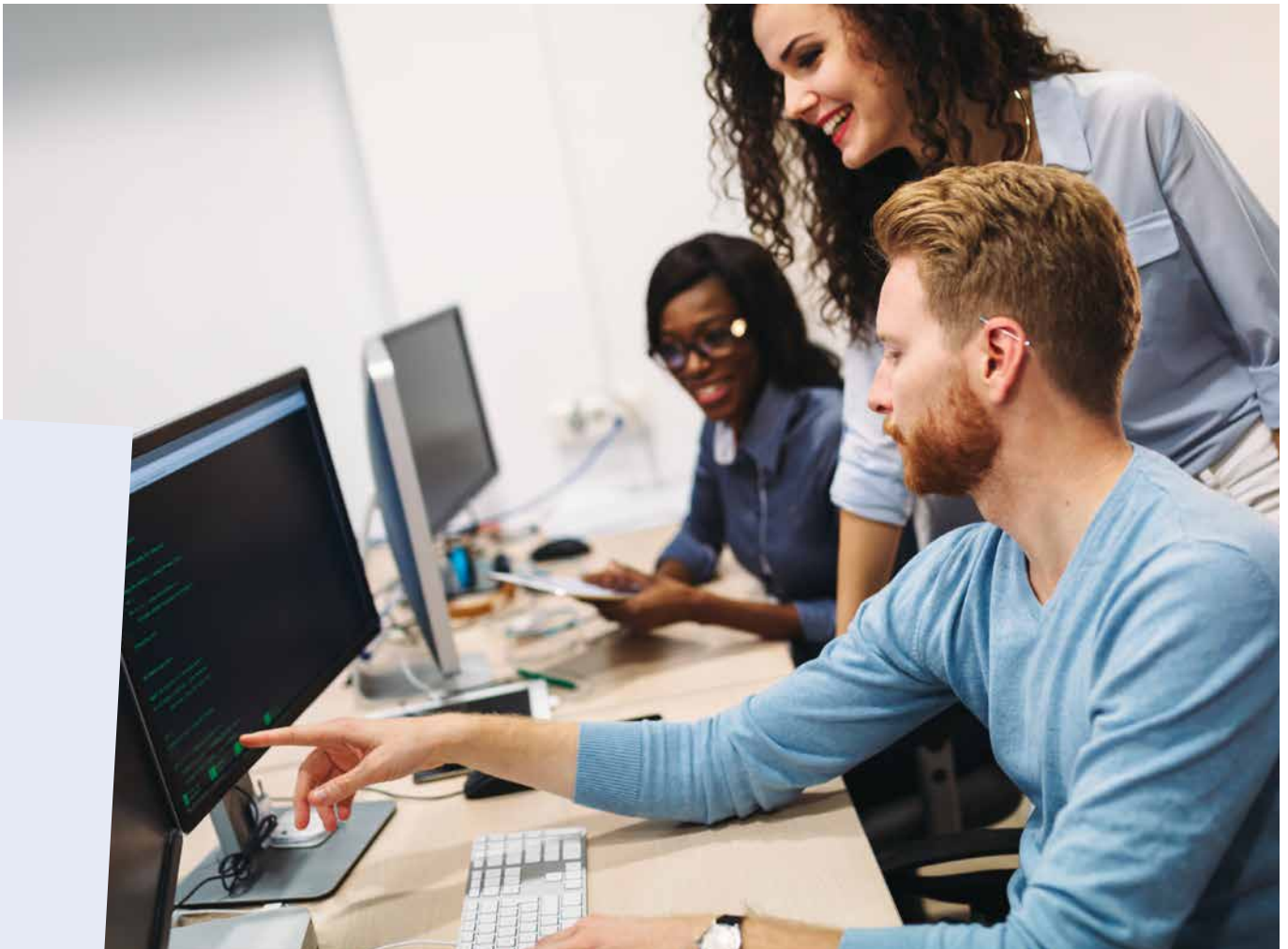
The study content is taught using the method of project-based learning: each of the first four semesters ends with an intensive two-week project phase. These project phases – called Creative Code Labs – are assigned to specific topics that differ from semester to semester. The topics of the Creative Code Labs in the first four semesters are: Games and Playful Frontends, Connected World, Mobile Applications and Extending Realities.

Internationalisation at Home

The international and interdisciplinary project semester is an essential component of the degree programme. The students

form interdisciplinary teams who strive to solve a certain problem during the semester. Our objective is to offer all students the opportunity to gain experience with international teams, independent of stays abroad. However, we also strongly encourage students to opt for a semester abroad.

In addition, a professional internship in the fifth semester gives our students the opportunity to put the acquired content into practice. Supervisors provide individual mentoring and assistance during the internship.



Curriculum Creative Computing

1st year of studies

| 1 st semester | ECTS |
|--------------------------------------------------|------|
| Frontend Development | |
| Introduction to Web Technologies | 3 |
| Client-Side Coding | 4 |
| 2D Browser Game Coding | 3 |
| User Interface Design | |
| Graphic Design | 3 |
| 2D Game Graphics | 2 |
| Foundations of Creative Computing | |
| Game Design and Digital Storytelling | 4 |
| Design Thinking | 1,5 |
| Agile Software Lifecycle Management | 1,5 |
| 2D Game Mathematics and Physics | 3 |
| Creative Code Lab 1: Games and Playful Frontends | 5 |

| 2 nd semester | ECTS |
|----------------------------------------------------|------|
| Web Programming | |
| Server-Side Coding | 3 |
| Database Systems & Web Services | 2 |
| Design-Oriented HCI | |
| Introduction to Human-Centred Design | 2 |
| User Research | 3 |
| Web Design | |
| Visual Interface Design | 2 |
| Responsive Design and Prototyping | 3 |
| Foundations of Creative Computing 2 | |
| Networks, Cloud & Communication Security | 3 |
| Applied Artificial Intelligence (AI) | 3 |
| Design for All | 2 |
| Selected Legal Topics for Developers and Designers | 2 |
| Creative Code Lab 2: Connected World | 5 |

2nd year of studies

| 3 rd semester | ECTS |
|--------------------------------------------------|------|
| Mobile Programming | |
| Mobile Coding | 3 |
| Software Testing | 2 |
| Empirical Methods in HCI | |
| Usability and Experience Evaluation | 5 |
| Mobile User Interface Design | |
| User Interface Design for Mobile Devices | 2 |
| Interaction, Interfaces and Prototyping | 3 |
| Physical Computing and Internet of Things | |
| Physical Computing and Connectivity | 3 |
| Tangible User Interfaces | 2 |
| Elective Module | |
| Elective Module | 5 |
| Creative Code Lab 3: Mobile Applications | 5 |

| 4 th semester | ECTS |
|------------------------------------------------|------|
| Cross-Reality Coding | |
| C# Development | 2 |
| 3D Computer Graphics and Animation | 4 |
| Engine-Based Cross Reality Development | 3 |
| Team-Based Agile Software Lifecycle Management | 1 |
| 3D Design | |
| 3D Modelling and Animation | 3 |
| Game Audio | 2 |
| Scientific Writing | |
| Scientific Writing | 5 |
| Elective Module | |
| Elective Module | 5 |
| Creative Code Lab 4: Extending Realities | 5 |

3rd year of studies

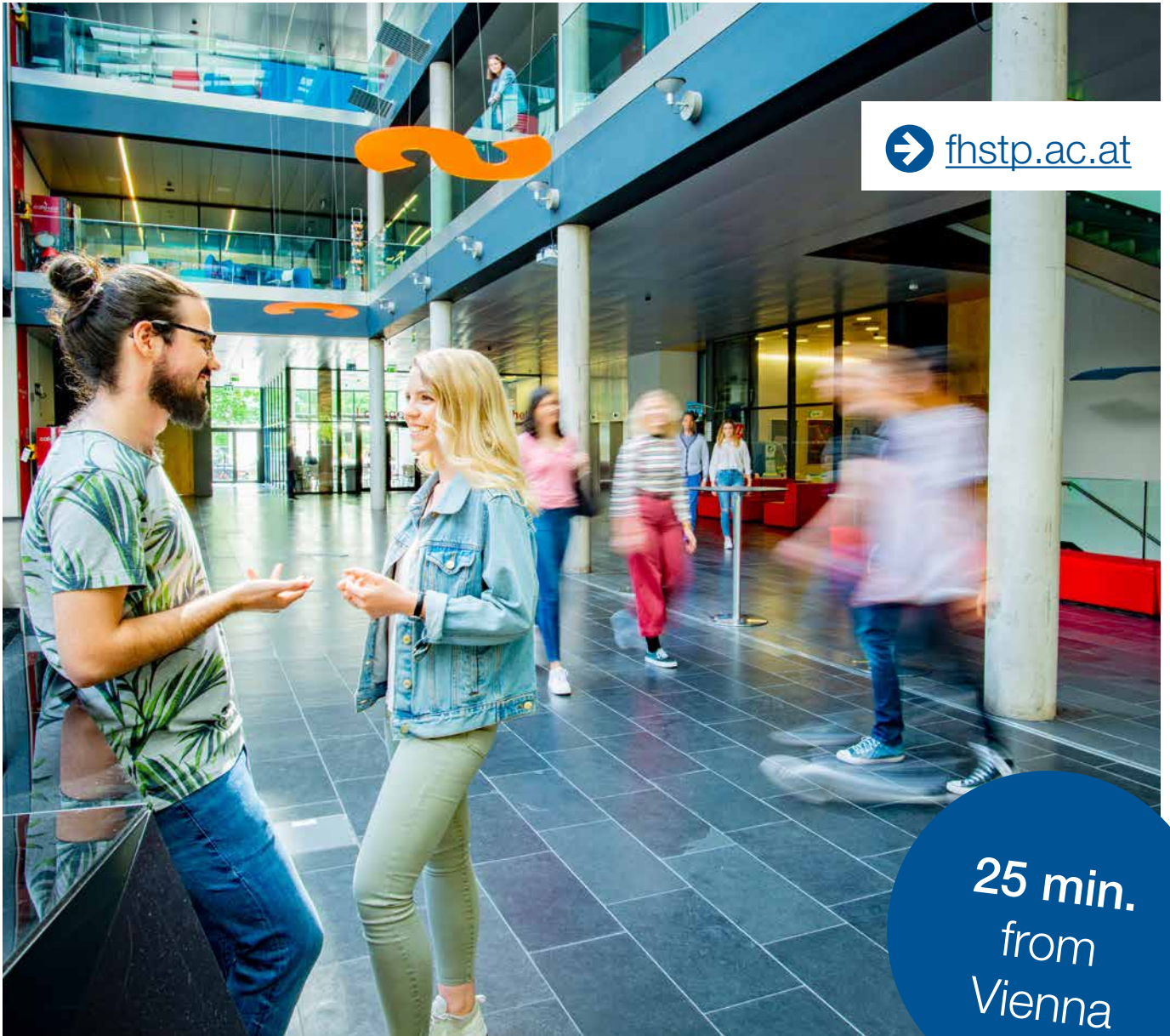
| 5 th semester | ECTS |
|--------------------------|------|
| Internship | 20 |
| Bachelor Thesis | 10 |

| 6 th semester | ECTS |
|---------------------------|------|
| Project Semester | |
| Project Work | 19 |
| Project Coaching | 3 |
| Project-Specific Coaching | 6 |
| Bachelor Exam | 2 |

ECTS: European Credit Transfer System – measuring unit for the overall effort that it takes an average student to positively complete a course. One credit point equals a workload of 25 hours (presence times, independent studies, examinations, etc.).



The current course schedule is also available online under “Course Contents”: fhstp.ac.at/bcc



 fhstp.ac.at

25 min.
from
Vienna

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