

JOINT MASTER | FULL-TIME | 4 SEMESTERS | ENGLISH

*Gamified Reality Applications for Real-world Challenges and Experiences (GRACE)**

St. Pölten University of Applied Sciences (Austria)
Saxion University of Applied Sciences (The Netherlands)
Vidzeme University of Applied Sciences (Latvia)

**subject to successful
accreditation according to
the European Approach for
Quality Assurance of Joint
Master Programmes by
AQ Austria*



E³UDRES²
Joint Master

GRACE

Gamified Reality Applications for Real-world Challenges and Experiences¹

Are you a creative problem-solver with a bachelor's degree in Game Design, Information Technologies, or a related field? Do you have solid programming skills and a passion for applying Extended Reality (XR) and gamification in innovative ways across different sectors? If so, GRACE could be the perfect next step in your academic journey.

Your Studies

GRACE - Gamified Reality Applications for Real-world Challenges and Experiences is an innovative Joint Master Programme led by a consortium of partners belonging to the European University Alliance E³UDRES² designed to master the art and science of Extended Reality (XR) and gamification for enhanced learning experiences. This interdisciplinary programme focuses on developing advanced XR tools that revolutionise professional education, training, and skill development across healthcare, education, and industrial sectors.

Semester Breakdown²

- 1st Semester (at the St. Pölten UAS in Austria): Focused on the fundamentals of XR and gamification, you will begin with a basic bootcamp and move on to concept development and preliminary design work, thus setting the stage for your GRACE journey.
- 2nd Semester (at Saxion UAS in the Netherlands): Dive into specialised courses in game design principles and educational methodologies to learn how to transform traditional content into engaging, interactive experiences.
- 3rd Semester (at Vidzeme UAS in Latvia): Adopting a more technical focus, you will develop high-fidelity prototypes, engage in user testing, and begin to understand the business side of bringing an XR product to market.

- 4th Semester (one of the three locations): This is the stage where you will refine your product for implementation. It involves polishing, evaluating, and the writing of a thesis that will demonstrate your entrepreneurial and scientific skills to potential employers.

Your Benefits

Career Advancement: Prepare for sought-after positions that require advanced skills in XR development across multiple industries.

Global Engagement: Benefit from a diverse learning environment and internships that will give you a strong international experience.

Networking & Impact: Connect with industry leaders to build a professional network that spans the globe. Our collaboration with industry and research institutes is not just about knowledge, but about creating pathways to future employment. The mentorship programme integrated into our curriculum bridges the gap between academic learning and professional application.

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² Semesters 2 & 3 or 3 & 4 are likely eligible for financial support through the Erasmus+ Student Exchange grant.



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Academic Degree

Master of Science (Joint/Multiple
MSc Degree)



Duration of Studies

4 semesters



Tuition Fees³

363.36 € per semester
+ Students' Union fee



Application & Admission Procedure:

fhstp.ac.at/guide



Study Places/Year

25



Organisational Form

full-time
English

³for students from third countries: 1,500 € in performance-based tuition fee waivers are available

What Makes Your Studies Unique

GRACE is more than just a degree - it is an opportunity to be part of an international and interdisciplinary collaboration, to engage with diverse teams, and to adapt to a variety of cultural contexts. Our strong industry connections offer a practical learning journey that goes beyond the classroom. The unique **Path to Reality** within GRACE will equip you with design-thinking and entrepreneurial competencies, enabling you to bring your ideas to life, from inception to a market-ready prototype. Our tailored mentorship programme offers a chance to work closely with professionals, gaining invaluable insights and experience in your field of study. Embark on a journey with GRACE where learning meets innovation.

Core Learning Outcomes:

Design & Innovation: You will start with basic XR principles and user-centred design, before moving on to advanced application crafting.

Didactics & Gamification: Learn to apply and extend game design strategies to create impactful educational and training experiences.

XR Development & Implementation: Deepen your programming prowess as you develop sophisticated XR applications and bring them to life.

Evaluation & Dissemination: Fine-tune your ability to critically assess and effectively communicate the significance of your XR projects to various audiences.

| Semester 1 St. Pölten UAS | Semester 2 Saxion UAS | Semester 3 Vidzeme UAS | Semester 4 |
|---|--------------------------|---------------------------|-------------------------------|
| 1. Path to Reality (I-IV) | | | Master Project & Thesis |
| 2. Design & Innovation (I-III) | | | |
| 3. Didactics & Gamification (I & II) | | | |
| 4. Development & Implementation (I-III) | | | |
| 5. Evaluation & Dissemination (I-III) | | | |

Curriculum

1st year of studies

| 1 st semester | ECTS |
|---|------|
| St. Pölten UAS | |
| Path to Reality | |
| Exposé | 5 |
| Design & Innovation | |
| Innovation & Creative Problem-Solving | 2 |
| Agile Software Life Cycle Management | 1 |
| Applied Artificial Intelligence | 2 |
| Didactics & Gamification | |
| Bootcamp | 2 |
| Media-Based Instructional Design | 3 |
| Development & Implementation | |
| Object-Oriented Programming | 2 |
| Augmented & Virtual Reality in Health, Industry, and Education-Related Contexts | 5 |
| Audio for Extended Realities | 3 |
| Evaluation & Dissemination | |
| Scientific Writing, Presentation & Dissemination | 2 |
| Selected Legal Topics for Developers & Designers | 1 |
| Usability & Experience Evaluation | 2 |

| 2 nd semester | ECTS |
|--|------|
| Saxion UAS | |
| Path to Reality | |
| Low-Fi Prototype | 5 |
| Design & Innovation | |
| Design & Implementation of XR Learning Experiences | 5 |
| Didactics & Gamification | |
| Fundamentals of XR and Learning Theories | 5 |
| Principles of Gamification Design | 2.5 |
| Business Strategy for Gamification Solutions | 2.5 |
| Development & Implementation | |
| Prototype Development Elective courses: Unfam. Territory, Technical Prototyping, Multimodal Interaction | 5 |
| Evaluation & Dissemination | |
| Research Design | 5 |

2nd year of studies

| 3 rd semester | ECTS |
|---|------|
| Vidzeme UAS | |
| Path to Reality | |
| High-Fi Prototype | 6 |
| Design & Innovation | |
| Hackathon | 3 |
| Development & Implementation | |
| XR Hardware and Physical Structure | 3 |
| Mobile and Web-Based XR Solutions | 6 |
| Advanced 3D Modelling within Interactive Environments | 6 |
| Geometry Processing & Visualisation | 3 |
| Evaluation & Dissemination | |
| Scientific Publications and Knowledge Transfer | 3 |

| 4 th semester | ECTS |
|-------------------------------------|------|
| Project Implementation & Evaluation | 28 |
| Final Examination | 2 |



Admission Requirements

Applicants must hold a Bachelor of Science or a Bachelor of Engineering degree or an equivalent university diploma in Game Development, Game Design, Creative Computing, Digital Games, Information Technology, Multimedia Technology, Computer Science in Real-Time Interactive Simulation, Extended Reality, Expanded Reality, AR/VR/XR Development & Design, or XR Design. A minimum of TOEFL 550, IELTS 6.0, or similar English language qualification is required for EU and non-EU students.

Information & Contact

Campus und Study Center (CSC) | T: +43 2742 313 228-333 | E: csc@fhstp.ac.at | I: fhstp.ac.at

Diversity at the Campus St. Pölten

Everybody is welcome: Inclusion, gender equality, and diversity are important to us. Our campus is accessible barrier-free. Please contact us in good time so that we can take your needs into account.