

Experimenting in Virtual Reality

Module Guide 2020

Author(s)	Lisette Vonk, Kees Rijsenbrij, Anne Marleen Olthof, Remco Hilbert
Module ID	
Academic Year	2019-2020
ECTS	3
Contact hours	80
Self study hours	4
Course site	https://www.amsterdamuas.com/summerschool/course/fdmci/experimenting-in-virtual-and-augmented-reality/experimenting-in-virtual-and-augmented-reality.html?origin=V3tk7654RSmvcl9Y7fgNMQ

Module overview

1.1 Content

Virtual Reality (VR), Augmented Reality (AR), Mixed Reality (MR): you hear about it all the time. How it will change the way we experience movies, how we will learn in the future or how it can help you get rid of your traumas. Perhaps you already have experienced its immersiveness at an exhibition or game show. VR is booming. But is it here to stay? We see less of it in our personal lives and only very few serious applications exist where VR is accepted as an invaluable step forward.

VR isn't an easy technology and we don't really know all too well what works and what does not, and what impact it has on people. In this summer course you will be immersing yourself in this exciting new world while trying to bring the technology to the next level. You will design and implement an experiment in and for VR, where you will try to answer a question on the usability, applicability, or effectiveness of VR in your self-built VR environment. For example: if you want to control a vehicle in VR, would it be beneficial to use a (mock-up of a) steering wheel as an input device or can I just use a generic "wand-like" controller such as those that come with commercial VR systems? Or, if you want to collaborate in a multi-player VR experience, is it more important that the players can hear each other or that they can see each other? You will learn what VR is, what you can and can't do with it; you will learn how to build a basic 3D environment, how to set up and conduct experiment, and how to analyze, interpret and present the results. After two weeks, you can answer your research question, show the results and conclusion(s) in a research poster. We are looking forward for you helping us to explore what does and does not work!

1.2 Learning outcomes

#	You can:
1.	Build a 3D environment for VR with different interaction methods
2.	Set-up and conduct a small research project
3.	Gather, analyse and present data
4.	See the possibilities and difficulties in creating and using virtual reality

1.3 Learning activities

- ✓ Workshops
- ✓ Project work
- ✓ Excursion
- ✓ Coaching

1.4 Teaching methodologies

See 1.3

1.5 Study materials & recommended further reading

Mandatory

You have to do [the roll the ball tutorial](#) beforehand. Even when you have already worked in Unity before, please do the tutorial anyway and bring the result to the class. No experience in Unity? Don't worry, the tutorial will guide you through the process. Unity can be downloaded for free [here](#).

Recommended

Bring one youtube video of fun/inspiring/interesting VR experience to the first class.



1.6 Assignments & assessment

Assignments / Tests	Weight (%)
Personal Process Book	70%
Poster presentation	30%
	100%

2. Lesson Planning

Week 1 Day 1	8:00-9:00 Registration 9:00-10:00 Opening Summer school 12:30-13:30 Lunch 16:00-17:00 Dutch Culture/ film 17:00 Welcome drinks
Week 1 Day 2	12:30-13:30 Lunch
Week 1 Day 3	12:30-13:30 Lunch
Week 1 Day 4	12:30-13:30 Lunch
Week 1 Day 5	12:30-13:30 Lunch
Week 2 Day 1	12:30-13:30 Lunch
Week 2 Day 2	12:30-13:30 Lunch
Week 2 Day 3	12:30-13:30 Lunch
Week 2 Day 4	12:30-13:30 Lunch
Week 2 Day 5	12:30-13:30 Lunch 16:00 Certificate ceremony 17:00 Farewell drink

