

4.APR-13.MAY.2022

PROGRAMME DESCRIPTION/OBJECTIVE

Featuring a design challenge for a digital product for advancing physical health, this Short Advanced Programme (SAP) brings together engineering and design students to improve people's lives. In this programme, you will explore possibilities of digital technology to advance physical health of students.

Students will learn how to apply design thinking in digital product development and how to run an innovation process in an international multidisciplinary team. You will gain knowledge of the specific technology used in the design challenge and learn critical elements in the nexus of technology and design.

The programme consists of two mobility weeks (one in Finland, another in Portugal) and online periods with teamwork.

PROPOSED LEARNING OUTCOMES

At the end of this RUN-EU SAP students will be able to:

- Apply design thinking in digital product development;
- Run an innovation process in an international multidisciplinary team;
- Know the specific technology for collecting, transferring and analysing health data (such as sensors, microcontrollers to be used in the design challenge)
- Understand the critical elements in the nexus of technology and design.

+INFO: www.run-eu.eu

DATE From 4 April to 13 May 2022

Face-to-Face Contact Weeks: HAMK, Finland: 4-8 April IPCA, Portugal: 9-13 May

MODE OF DELIVERY Blended

LANGUAGE OF INSTRUCTION English

ECTS CREDITS 3

ACADEMIC RECOGNITION

HAMK and IPCA will provide a transcript of records of 3 ECTS

ELIGIBLE PARTICIPANTS

Bachelor's and Master's degree students in design, information technologies, and engineering.

HOW TO APPLY

Fill in the application form (QR or website)



DEADLINE FOR APPLICATIONS

28 February 2022

CONTACT DETAILS

SAP Organising Team, SAPgo4digitalproduct@ipca.pt



















4.APR-13.MAY.2022

SELECTION CRITERIA

The student's motivation/expectations for participating. The selection aims to ensure a wide representation of subject areas/fields, gender balance and diversity, as well as balanced participation of RUN-EU member institutions. A maximum of 25 students will be selected for this programme.

LEARNING AND TEACHING STRATEGY

Tutored learning, technology workshops, challenge-based teamwork, and learning.

PREREQUISITES

Not required.

COURSES LEADERS | LECTURERS

Courses leaders

Timo Karppinen (HAMK) António Moreira (IPCA)

Lecturers and coaches

Jan-Peter Nowak (HAMK)
Jaakko Vasko (HAMK)
Pirjo Seddiki (HAMK)
Ville Siipola (HAMK)
Cristina Coutinho Pereira (IPCA)
João Pedro Borges Silva (IPCA)
Mário Fonseca (IPCA)
Miguel Terroso (IPCA)
Fernando Veloso (IPCA)

PHYSICAL MOBILITY | SCHOLARSHIPS AVAILABLE

To be managed by the home institution. Students' scholarships:

+INFO: www.run-eu.eu

Travel: €350/person I Subsistence: €400/week
Because this SAP has two compulsory mobility periods,
participants from other institutions than HAMK and IPCA
should receive two travel grants and two subsistence weeks.
The final decision on the scholarships to be awarded falls
under the responsibility of the RUN-EU project leader at the
student's home institution and compulsorily requires IRO
involvement.

MEANS AND CRITERIA FOR ASSESSMENT

Assignments related to the design innovation process, application of the given technology in the product design, prototype meeting the needs of the target group and other criteria of the design challenge.

Assessment scales from satisfactory to excellent.

CERTIFICATION

The participants who successfully complete this RUN-EU SAP will receive a Certificate of Participation and a Transcript of Records jointly issued by the organising institutions.

REFERENCE READING

Communication on enabling the digital transformation of health and care in the Digital Single Market; empowering citizens and building a healthier society, COM (2018) 233 final, European Commission.

Digital Health Europe website.

Global strategy on digital health 2020-2025, World Health Organization 2021.



















4-8.APRIL.2022

PROGRAMME AT A GLANCE

+INFO: www.run-eu.eu

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FRIDAY 8/4		TEAM	WORK		F	POSTER			Q&A	ASSESS & CHAL								



















11.APR-6.MAY.2022

PROGRAMME AT A GLANCE

+INFO: www.run-eu.eu

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WEDNESDAY 4/5										VIS	UAL DES	IGN		TI	EAMWO	DRK	



















9-13.MAY.2022

PROGRAMME AT A GLANCE

+INFO: www.run-eu.eu

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MONDAY 4/4		WEL	СОМЕ		TEAM JILDING	NANC CHAL				HW 101	D	ESIG	an 1				С	ITY TOU	R	

WELCOME

- (9h00-10h30
- Groupwork
- SAP leaders and lecturers
- Introduction to digital product development cyclen and, learning objectives

TEAMBUILDING

- (1) 11h00-12h00
- Groupwork
- SAP leaders and lecturers
- Teambuilding actions and social interaction.

NANOCHALLENGE

- (12h00-12h30
- **⊞** Groupwork
- SAP leaders and lecturers
- Presenting a digital product use-case as a guideline for the week.

HW 101

- (h) 13h30-14h30
- Zimo Karppinen, António Moreira, João Pedro Borges Silva
- Overview of electronics devices, hardware/software tools with product contextualisation and integration. Basics of coding to interact with hardware devices.

DESIGN 1

- (h) 14h45-16h00
- Groupwork
- Cristina Coutinho Pereira, Pirjo Seddiki
- Introduction to the design goals for the SAP programme. Procedural methodologies in development, design thinking and phases in building a digital product.

CITY TOUR

- (1) 17h00-19h00
- Excursion
- A HAMK personnel
- Get to know the local city and sights.



















5 /	APF	RI I	L				7	ΓUΕ	ES	SDAY	' 9h()0-	-19h	00) GI	ΛI٦		
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TUESDAY 5/4	H/	W SE	NSORS	ACT	HW	ORS				DESIGN 2	S) LOWC						SPORT	

HW SENSORS

- (9h00-10h30
- Individual work
- Zimo Karppinen, Jan-Peter Nowak
- How does a device gather information from the world? Presenting different sensors.

HW ACTUATORS

- (1) 11h00-12h00
- A Timo Karppinen, Jan-Peter Nowak
- How does a device interact with the world? Presenting different actuators.

DESIGN 2

- (1) 13h30-14h30
- Individual work
- Cristina Coutinho Pereira, Pirjo Seddiki
- What is design research? Basic princiles of design research, how to gather qualitative information.

SW LOWCODE 1

- (h) 14h45-16h00
- Individual work
- António Moreira, João Pedro Borges Silva
- What is a digital application? Learn basic software development tools to receive information from hardware or users and to provide intelligent information to the UI.

SPORT

- (1) 17h00-19h00
- Eun together
- A HAMK personnel
- Guided evening with a chance to move together.



















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HW CONNECTIVITY

- (9h00-10h30
- Individual work
- António Moreira, João Pedro Borges Silva, Timo Karppinen
- How does a device gather information from the world? Presenting different sensors.

SW LOWCODE 2

- (1) 11h00-12h00
- Individual work
- António Moreira, João Pedro Borges Silva, Timo Karppinen
- How does a digital application connect with a hardware device? Learn how to gather and provide information from and to a device (i.e. Protopie Connect).

DESIGN 3

- (1) 13h30-14h30
- Individual work
- Cristina Coutinho Pereira, Pirjo Seddiki
- Problem definition and framework based on the information gathered during the design research phase. Learn the necessary tools to formulate a strategy and build.

DESIGN 4

- (h) 14h45-16h00
- Teamwork
- Cristina Coutinho Pereira, Pirjo Seddiki
- Hands-on class where students apply the knowledge learned. Gather information, build personas and usage scenarios, experience maps, low-fi diagrams, wireframes and wireflows.



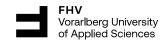
















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SW LOWCODE 3

- 9h00-10h30
- Individual work
- António Moreira, João Pedro Borges Silva, Timo Karppinen
- How to add UX to a digital application? Learn how to implement real-time digital UI projects (i.e. Figma, ProtoPie) with practical examples.

DESIGN 5 TW

- (1) 11h00-12h00
- **™** Teamwork
- Cristina Coutinho Pereira, Pirjo Seddiki
- What is a functional prototype?
 Learn the main advantages of
 developing a UI & UX prototype
 and how to build a functional
 prototype with existing tools.

DESIGN 6 TW

- (13h30-14h30
- Teamwork
- Cristina Coutinho Pereira, Pirjo Seddiki
- Learn hands-on how to make a low-fi prototype based on the tools previously presented.

TEAMWORK

- (h) 14h45-16h00
- Teamwork
- \triangle N/A
- Process your design together.

DINNER

- (1) 17h00-19h00
- E Fun together
- A HAMK personnel
- Dine out with your colleagues.



















8	APF	RI I	L						FR	IC	PAY	9	h00)-1	9h0	0	GM	Т		
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FRIDAY 8/4		ГЕАМ	WORK		f	POSTE	≣R				Q&A		ASSESS & CHAL							

TEAMWORK

- (9h00-10h30
- Teamwork
- △ N/A
- Process your design together.

POSTER

- (b) 11h00-12h00
- **™** Teamwork
- SAP leaders and lecturers
- Create a poster of your work.

Q&A

- (1) 13h30-14h30
- SAP leaders and lecturers
- Open Q&A session.

ASSESSMENT & CHALLENGE

- (h) 14h45-16h00
- Teamwork
- SAP leaders and lecturers
- Prepare for the programme's online phase.



















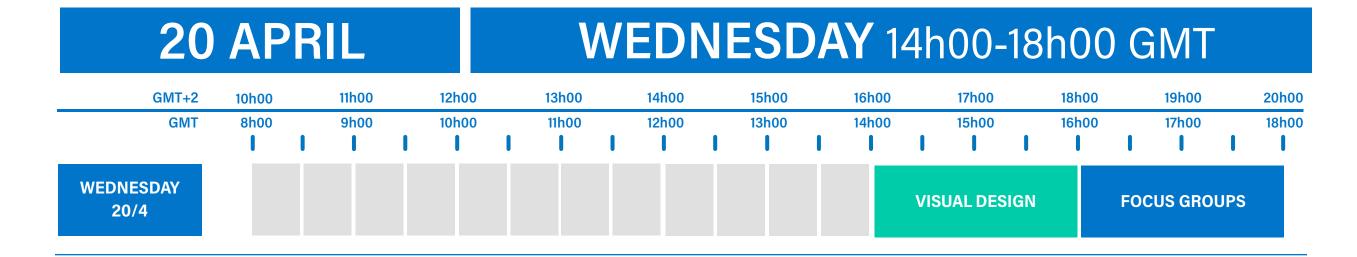
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WEDNESDAY 13/4												3D	MODELL	LING		TI	EAMWOF	RK	

3D MODELLING

- (h) 14h00-16h00
- Groupwork
- A Jaakko Vasko
- Basic 2D and 3D concepts to build a functional prototype. Tools for 3D modelling.

TEAMWORK

- 16h00-18h00
- R: Teamwork
- △ N/A
- Common time to progress your plans.



VISUAL DESIGN

- (h) 14h00-16h00
- Groupwork
- Cristina Coutinho Pereira, Pirjo Seddiki
- Intro to visual design, UI & UX

FOCUS GROUPS

- (h) 16h00-18h00
- Teamwork
- ∠ N/A
- End user research



















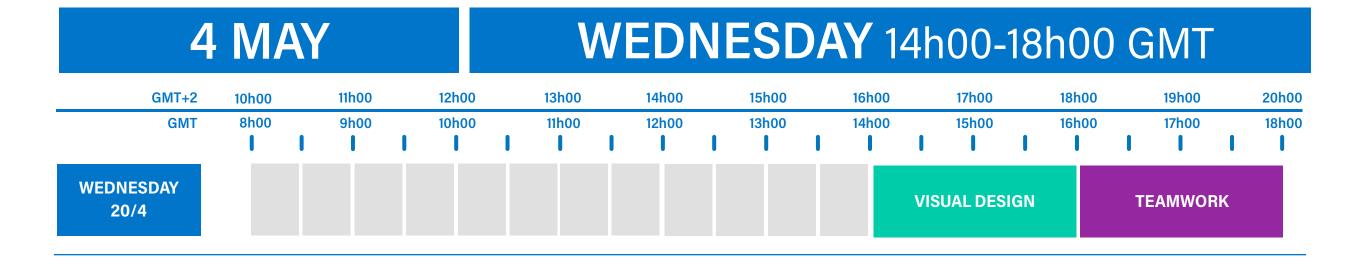
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WEDNESDAY 13/4														3D	MODELL	_ING		TI	EAMWOF	RK	

3D MODELLING

- (h) 14h00-16h00
- Groupwork
- A Jaakko Vasko
- Basic 2D and 3D concepts to build a functional prototype. Tools for 3D modelling.

TEAMWORK

- ① 16h00-18h00
- R: Teamwork
- △ N/A
- Common time to progress your plans.



VISUAL DESIGN

- (h) 14h00-16h00
- Groupwork
- Cristina Coutinho Pereira, Pirjo Seddiki
- Intro to visual design, UI & UX

TEAMWORK

- ① 16h00-18h00
- 🟪 Teamwork
- ∠ N/A
- End user research



















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MONDAY 9/5							OUTDO	ORS /	ACTIVITY	/ / OI	NLINE AC	TIVI	TIES REV	'IEW	/ TEAM E	BUILD	ING			

OUTDOORS ACTIVITY / ONLINE ACTIVITIES REVIEW / TEAM BUILDING

- 9h00-18h00
- Groupwork
- SAP leaders and lecturers
- Outdoors excursion; reviewing the online week's activities; team building



















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TUESDAY 10/5				PEEF	R PITCH				/ 3D ELLING						/ HW ESIGN		1	EAMV	VORK	СІТҮ Т	OUR

PEER PITCH

- (9h00-10h30
- Groupwork
- SAP leaders and lecturers
- Practice pitching.

TW / 3D MODELLING

- (h) 11h00-12h30
- Groupwork

3D modelling.

A Jaakko Vasko

TW / HW & DESIGN

- (1) 14h00-15h30
- Groupwork
- Zimo Karppinen, António Moreira, João Pedro Borges Silva, Cristina Coutinho Pereira, Pirjo Seddiki
- The laboratory facilities for the hardware development. The sensor actuator controller design model interaction.

TEAMWORK

- (h) 16h00-17h00
- Teamwork
- \triangle N/A
- Process your design together.

CITY TOUR

- (1) 17h00-18h00
- **Excursion**
- PCA personnel
- Get to know the local city and sights.



















11	WEDNESDAY 9h00-19h00 GMT																			
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WEDNESDAY 11/5				/ / 3D ESIGN			TW / HV						TEAM	IWORK		TE	AMWO	ORK		

TW / 3D & DESIGN

- 9h00-10h30
- Groupwork
- Zaakko Vasko, Cristina Coutinho Pereira, Pirjo Seddiki

TW / HW & LOWCODE

- (h) 11h00-12h30
- Groupwork
- Zimo Karppinen, António Moreira, João Pedro Borges Silva
- The sensor actuator controller design model interaction.

TEAMWORK

- () 14h00-15h30
- Teamwork
- △ N/A
- Process your design together.

TEAMWORK

- (h) 16h00-17h00
- Teamwork
- \triangle N/A
- 🖺 Process your design together.



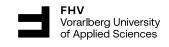
















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THURSDAY 12/5		TW / 3D & DESIGN					TW / DESIGN & LOWCODE						TEA	MWORK		TE	AMW	ORK	DINN	ER		

TW / 3D & DESIGN

- 9h00-10h30
- Groupwork
- Zaakko Vasko, Cristina Coutinho Pereira, Pirjo Seddiki
- Practice pitching.

TW / DESIGN & LOWCODE

- (1) 11h00-12h30
- Groupwork
- António Moreira, João Pedro Borges Silva, Cristina Coutinho Pereira, Pirjo Seddiki

TEAMWORK

- () 14h00-15h30
- △ N/A
- Process your design together.

TEAMWORK

- (h) 16h00-17h00
- Teamwork
- \triangle N/A
- Process your design together.

DINNER

- (1) 17h00-18h00
- E Fun together
- PCA personnel
- Dine out with your colleagues.



















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FRIDAY 13/5				TEAN	MWORK			PITCH							PITCH		LEAR REFLE				

TEAMWORK

- (9h00-10h30
- Teamwork
- △ N/A
- Process your design together.

PITCH

- (h) 11h00-12h30
- Groupwork
- SAP leaders and lecturers
- Pitch your final product.

PITCH

- () 14h00-15h30
- SAP leaders and lecturers
- Pitch your final product.

LEARNING REFLECTION

- (h) 16h00-17h00
- SAP leaders and lecturers
- What did you learn? How to implement these learnings in the future?















