



Jiří Šedivý, Chief Executive of the European Defence Agency (EDA)



EUROPEAN
DEFENCE
AGENCY



UNIVERSITY OF NEBRASKA
MEDICAL CENTER
iEXCEL™

cp cases



LINCAD
POWER MANAGEMENT SYSTEMS



UNMCSM

iEXCEL

Improving Human Performance & Effectiveness in Health Professions Education

iEXCEL in the Davis Global Center - University of Nebraska Medical Center in Omaha, NE

EXPERIENTIAL LEARNING

**TRANSFORMING
HEALTH CARE
EDUCATION**

INNOVATIVE RESEARCH

HEALTH CARE CONTENT CREATION

- World-class content creation team
- Precision, accuracy & realism
- 3D assets & modules for all platforms

CUTTING-EDGE TECHNOLOGIES

- Augmented & Virtual Reality (AR/VR)
- 3D & Holographic imaging
- Advanced visualization technologies

REMOTE & DISTRIBUTED TRAINING

- Global connectivity
- Real-time collaboration
- Interprofessional training across distance

**SAFETY FOCUSED
OUTCOMES DRIVEN**

Visit unmc.edu/iEXCEL to learn more.

Defence Global Contents



Foreword

Jiří Šedivý, Chief Executive of the European Defence Agency (EDA)	3
---	---

Overview



NATO Science & Technology Organization: Mitigating and Responding to Cognitive Warfare	6
Stockholm International Peace Research Institute (SIPRI): World Military Spending	7-9
Royal Australian Government: \$3.5 billion to accelerate missile strike capabilities for the ADF	10
European Defence Agency: IF CEED workshop looks at EU dependency on critical raw materials for defence	11
EUROSATORY PREVIEW	
Lincad: BLOCS Label Printer	12
Eurosatory	13-14
3M™ Peltor™: One System. Wireless Connected	15
CP Cases: What are server racks?	16
Eurosatory	17
DARPA: Seeks Ionospheric Insights to improve communication across domains	18
TEA Headsets: Setting the standards in tactical communications	19

Land Forces



Australian Government Department of Defence: Weapons program fires up	20
U.S. Army: Global Defender	21
U.S. Army: Stryker Brigade Combat Team equips modernized missile system	22
Ordnance Test Solutions: Independent Testing, Evaluation & Research Services for International Defence and Security	23
British Army: Army sparks up 'electrifying' plan for future battlefields	24-25
Thales: GRIFFON and JAGUAR	26
German Army: Ready for NATO Response Force 2022-2024	27-29
Qinetiq: The importance of trust within global defence teams	30
Swedish Armed Forces: More weapons and ammunition as allocations increase	31
Canadian Armed Forces: FORCE 2025: Informing the Army's future structure	32-34
Subscribe to Defence Global	35

Naval



UK Ministry of Defence: Dreadnought Submarine Nuclear Deterrent Programme	36
Bartington Instruments: Fluxgate Magnetometers for Defence Applications	37
Bronswerk Group: True commitment through local content	38
UDT 21	39
BAE Systems: Agreement to support Qatar Emiri Naval Force's Naval Base and Warships	40
Euronaval	41

Aviation

DARPA: ALIAS equipped Black Hawk helicopter completes first uninhabited flight	42-43
DARPA: Second Successful Flight for Hypersonic Air-breathing Weapon Concept (HAWC)	44
Boeing: Unveils first T-7A Red Hawk Advanced Trainer Jet to be delivered to the U.S. Air Force	45
Lockheed Martin: U.S. Marine Corps Declares Initial Operational Capability Of Sikorsky CH-53K®	46-47
GE Aviation: GE begins industry's first adaptive cycle engine tests at Arnold Engineering Development Complex	48
Royal Air Force: RAF takes key step on path to Net Zero 2040 with electric aircraft trials	49-50
Subscribe to Defence Global	51

Logistics

Defense Logistics Agency: Touches American lives	52-54
Defense Logistics Agency: 920th aircrew flight equipment team outfit flying operations	55
DIO: The next step on our journey to transform accommodation services for Armed Forces families	56-57
Ministry of Armed Forces - France: Ambition Housing Plan	58
DoD Healthcare Management System Modernization: New MHS GENESIS Capabilities Deployed at BAMC & LACKLAND	59
Birmingham University: Civilians and military take part in study to improve concussion prognosis	60-61
Massachusetts Institute of Technology: New device detects heat strain in military trainees	62-63

Communications



U.S. Army PEO C3T: Soldiers look to the sky to extend communications	64-65
Rohde & Schwarz: To equip German Navy's NH90 MRFH with secure communications	66
L3 Harris: Multi-Channel Handheld Radio	67
Base Camp Connect: Communicating during a coalition exercise	68
CANSEC	69
UK Ministry of Defence: UK Space Command marks one-year anniversary	70-71
U.S. Army PEO C3T: Army's integrated network rolls on with Stryker vehicles.....	72
NATO: Refreshes cyber security technology to protect its networks	73
Saab: Where you want it. When you want it	74-75
BAE Systems: Major upgrade to Compass Call with open system architecture	76
DSTL: First UK satellite launch in summer 2022	77-78
DARPA: Developing Algorithms that Make Decisions Aligned with Human Experts	79

Training & Simulation



University of Nebraska Medical Center: An iEXCEL iXR Innovation Academy	80-81
Eurosatory	82-83
QinetiQ: ETPS	84-85
Rheinmetall: Comprehensive integrated training	86
Idaho Army National Guard: Soldiers train for deployment	87
NATO Science & Technology: Empowering NATO's technological edge	88-89

Homeland & Maritime Security



U.S. Cyber Command: U.S. conducts first Hunt Forward Operation in Lithuania	90
AOC Europe	91
Milipol Qatar	92-93
The NATO Modelling and Simulation Group: Continues its efforts in support of Cyber Defence	94
ISNR	95
U.S. Naval Research Laboratory: PROTEUS Provides Global Maritime Domain Awareness	96-97
Subscription: Subscribe to Defence Global	98

Covers:

University of Nebraska Medical Center, CP Cases, Lincad

Logo's Front Cover:

University of Nebraska Medical Center, Eurosatory, CP Cases, Lincad

Credits: Images - Front Cover

Main image: Courtesy of U.S. Air Force

Other Images: Courtesy of UK Ministry of Defence

Barclay Media Limited
3rd Floor
44 Peter Street
Manchester
M2 5GP
T: +44 (0) 161 839 2115
editor@barclaymedia.uk.com

CEO
Roger Barclay
Managing Director
Sarah Barclay
www.barclaymedia.uk.com

An iEXCEL iXR Innovation Academy

Preparing the Future Digital Workforce: Creating the Leaders of Tomorrow

Preparing a Vibrant and Ready Digital Workforce

As UNMC was seeking staff to work in a large highly technical and creative training and research facility, a critical shortage of a well-prepared, digital workforce became very apparent. The intent was to recruit and hire a team who, with combined skill sets, would create highly accurate 3D and holographic digital assets. With a likelihood that the global workforce will not return to a “pre-COVID-19 world”, this gap in available digital and technological talent is predicted to become even more significant. Additionally, as the Metaverse evolves and technologies continue to advance, these digital skills gaps will be even more evident. A shortage of mission critical skills has been described as the next potential global disruptor. This observation has been reinforced in discussions with industry, government, and military leaders.

Staying competitive requires employees who know how to collaborate in teams and leverage data and artificial intelligence in order to take a quantum leap into the future. To ensure engagement in real world preparation, and support companies in attracting and retaining the right workforce with the right skill sets, iEXCEL (Inter-professional, Experiential Center for Enduring Learning) at the University of Nebraska Medical Center (UNMC) in Omaha, Nebraska, has designed an iXR Academy Professional Certificate Program. This academy will focus upon preparing individuals with digital and creative skills that prepare them for entering a rapidly changing and digital world.



The iXR Innovation Academy at iEXCEL

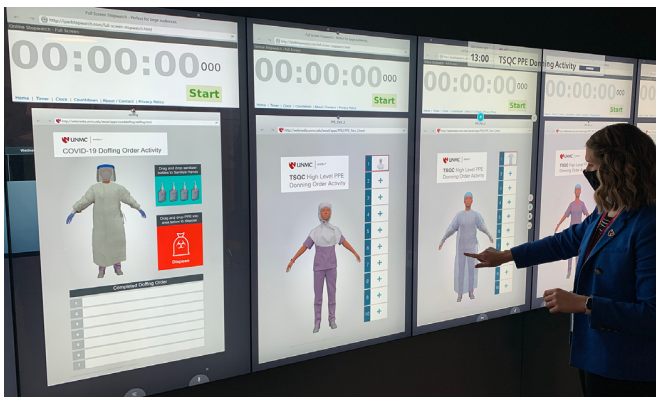
iEXCEL is recognized as a transformative model for health care education, training and research. This advanced simulation training and research center incorporates a wide range of modelling, simulation and visualization technologies that require digital, technological and creative talent. The intent is to address the perceived shortfall of highly prepared workforce talent in 3D, Augmented Reality/Virtual Reality (AR/VR) and holographic content creation. Thus far, iEXCEL has offered two successful community training academies. Academy course participants will be prepared to function in rapidly changing and highly digital work environments.

In Fall 2022, the iEXCEL iXR Innovation Academy is offering a newly designed 10-month course resulting in a Professional Development Certificate. This innovative course will help participants build digital skills, whilst working with visualization and immersive technologies to create 3D and holographic content, including highly accurate digital twins. The overarching goal is to ensure participants can enter and/or function in the workplace effectively by bringing up-to-date digital, visual, and technologic skills.

This academy involves problem solving, critical thinking and teamwork, and includes engagement in meaningful experiential learning activities. Hands-on exercises and team projects with the experienced, interdisciplinary iEXCEL visualization team are core to this experience. Faculty instructors will comprise of world class subject matter experts who are leaders in their fields. This course includes a matrix of topics and competencies designed using a flexible approach, to meet the future workforce needs of the military, industry and government entities.

Eligible applicants for the iXR Innovation Academy include new college graduates who are preparing for advanced digital roles with military and/or industry collaborators, as well as individuals mid-career, who need or wish to expand digital and visualization skills.





Academy Goals

Digital and Visualization Workforce training in the Academy will prepare for:

- New and future digital work force roles in 3D, AR/VR
- Content development & creation in Mixed or Extended Reality
- Experiential (Hands-on) Skill Development
- Problem solving, group discussion, mentoring, team effectiveness and working effectively
- Understanding of working in an agile environment

Participant Entry Competencies:

- A willingness to build strong communication and presentation skills
- Adaptability and an enthusiasm for continuous learning
- Creativity, imagination, and drive
- Flexibility, curiosity, and the ability to embrace complex design problems
- Capacity to communicate and collaborate with developers and subject matter experts

iEXCEL Academy Intent: Acceleration of the Digital Work Force

- Organize, administer & provide state-of-the art, experiential learning that is highly relevant for the newly emerging workplace.
- Deliver cutting edge, digital, visual and experiential education & training that prepares participants to create 3D & AR/VR content for the emerging digital platforms.
- Provide a hybrid training model with some knowledge delivered virtually, but primarily via project-based experiential (hands-on/interactive) training in identified sectors.

The iEXCEL iXR Innovation Academy offers a 10-month professional development certificate granting course specifically focused on 3D, AR/VR interactive content development and creation.

iEXCEL iXR Innovation Academy 10-Month Program

Learning Phase (3 Months)

Participants will learn visualization development concepts from subject matter experts.

Project Phase (7 Months)

Participants will collaborate with iEXCEL on comprehensive (experiential) hands-on projects.

iEXCEL iXR Innovation Academy: Course Content

	creativity	critical thinking	problem solving	decision making
Introduction to AR and VR Workflow	✓		✓	
Data capture and Analytics		✓	✓	✓
Predictive modelling		✓	✓	✓
Artificial Intelligence	✓	✓	✓	✓
Human Performance and Effectiveness		✓	✓	
Cyber Security		✓	✓	✓

The iEXCEL iXR Innovation Academy ensures “essential skills” are built into the technical components of the curriculum throughout the training. At the completion of this course, participants will be able to think and operate holistically (look at the big picture within real context), relate across disciplines, work in interdisciplinary teams, and have acquired highly desired “soft skills” such as decision making, program management, presentation skills and problem solving abilities. This methodology, together with personal drive, will lead candidates to adapt, build strong communication and presentation skills, and produce an understanding of what it takes to work in an agile environment.

Authors:

Pamela J. Boyers, PhD, Associate Vice Chancellor for iEXCEL, University of Nebraska Medical Center

Benjamin Stobbe, RN, MBA, Assistant Vice Chancellor for iEXCEL, University of Nebraska Medical Center



For further information visit:
www.unmc.edu/iexcel