

Department of Technology Application and Human Resource Development

Contact Information

Contact: LIN, Jie-Mao | LIN, Chien-Ling | LIN, Xiao-Ling

Tel: +886-2-7749-3439

Email: tahrd@deps.ntnu.edu.tw

Website: https://www.tahrd.ntnu.edu.tw/index.php/en/index_en/

Introduction

The Department of Technology Application and Human Resource Development (TAHRD) works to foster the next generation of digital talents for technology education, digital learning, and electronic human resources (e-HR).

Technology education is designed to teach students about technology within specific fields of study. STEAM is an educational approach to learning that uses Science, Technology, Engineering, the Arts and Mathematics as access points for guiding student inquiry, problem solving, and critical thinking. Our makerspace provides opportunities for students to identify problems, communicate ideas, and design and create solutions with STEAM. Learning with robotics gives students an opportunity to engage with real life problems that requires STEAM knowledge and competency.

Digital Learning is "learning facilitated by technology that gives students some element of control over time, place, path and/or pace." Digital learning is more than just providing students with a laptop. Digital learning requires a combination of technology, digital content and instruction. In

digital learning in particular, AR and VR applications are rapidly changing the way we learn, providing experiential learning by simulating real-world environments. AR and VR increases student engagement levels, and provides insights into what they will experience in various environments when they enter the workforce. Moreover, the use of game tactics in non-player situations is the essence of a new business practice called gamification. Working with established and emergent digital media, students will design rich technology-based, multimedia learning environments, understand and evaluate their use in varied educational settings, and conduct research on how people learn with technology. Digital learning is complemented by the Multimedia Design curriculum with host sites in all areas of educational technology and media.

e-HR is the use of technologies to provide Human Resources (HR) management services within employing organizations. In our department, e-HR embraces artificial intelligence (AI) application in HR, people analytics (data analytics used in HR decisions), and web-based HR information systems. e-HR is about considering the best technology

present in the workplace and how organizations will interact with that technology and also how people will want to work and plan for it. It's about a transition to a more automated workplace and the skills needed to facilitate that transition. Interest in e-HR talents with up-to-date skills has risen as more enterprises move from on-premise HR software to cloud-based services, and smaller organizations graduate from Excel or paper systems to similar online workforce platforms.

Instructional Objectives

Bachelor's degree program: This program will arm you with the "Maker" expertise, giving you the skills to become a technology teacher, a learning material designer, or a professional in digital HR at any organization.

Master's degree program: The program blends the state-of-the-art technology applications and human resources (HR), equipping you with the competencies to be a technology instructor, a technology consultant, or an HR expert in the digital era.

Doctorate degree program: The Ph.D. program trains scholars to conduct innovative research that cuts across disciplines in order to address significant challenges in the fields of "Technology & Engineering Education" and "Electronic Human Resources (e-HR)" as it relates to education and human resource policy settings.

Degree Requirements

Bachelor's degree program: 128 credits for graduation. The curriculum is divided into two tracks: "Design and Technology" and "Learning and Technology." It also involves core technology coursework (65 credits) and the other learning in STEAM (Science, Technology, Engineering, Arts, and Mathematics) education and electronic Human Resources (e-HR).

Master's degree program: 36 credits for graduation. This program combines the renowned interdisciplinary and "Maker" power with the fields of "Technology & Engineering Education", "Learning & Education Technology", and the "Electronic Human Resources (e-HR)." For experienced HR professionals, you can continue to work full-time while earning your degree part-time (30 credits required for graduation), allowing you to leverage your new knowledge and skills in real time.

Doctorate degree program: 27 credits for graduation. Our Ph.D. program prepares students to apply a rigorous scientific approach to the fields of "Technology & Engineering Education" and "Electronic Human Resources (eHR)."

Feature of the Curriculum

Creating real value from technological education and learning requires a thorough understanding of interactions between humans and technology. Our curriculum stands alone because we integrate these disciplines into a coherent program.

The department adopts Makeology to develop the digital talents of technology education, digital learning, and electronic human resources in the workplace. Our students work together to develop designs and products they can be proud of, involving Science, Technology, Engineering, the Arts and Mathematics. This is the kind of collaborative education that helps our students develop identities as lifelong learners and producers. The impact of what they create, design, shape, and build will be known in the future, but the time for making it happen is now.

A hands-on maker with expertise in both the domains of technology applications and HR can lead the change in what technology offers. That is the reason our graduates receive job offers from Fortune 500 companies and top educational institutions.

Career Prospects

Our students can elect a concentration in one of the following areas to meet their career aspirations:

Technology Education: Technology teacher in secondary school, Industrial technology instructor, Digital consultant.

Digital Learning: Learning materials designer, Learning software developer, Corporate learning and development professional, Training & development consultant

Electronic Human Resources: HR system implementation consultant, HR management consultant, Corporate HR professionals, HR data analyst, In-house HR-IT professional.

Upon graduating, our Ph.D.s receive desirable placements at academic institutions, government agencies, and consulting firms.