

# (XR) EXTENDED REALITY

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## Courses

### **XR 100. XR Research Practicum I. 1-3 Hour.**

Students obtain a hands-on experience engaging the functionality of extended reality (XR). While learning XR principles, experiential learning components of the course include assisting active XR projects, researching, organizing, and repairing XR equipment, as well as providing project and lab support.

### **XR 177. Extended Reality I. 3 Hours.**

Students are introduced to the foundational principles of extended reality (XR) including the key technological and physiological elements of XR. Focus is given to consumer XR and the key concepts which differentiate XR from other media technologies. Students explore XR through hands-on experimentation with important virtual and augmented reality technology. A portion of the class is dedicated to applying XR technology to a real-world project and presenting the results.

### **XR 200. XR Research Practicum II. 1-3 Hour.**

Students perform hands-on extended reality (XR) support. Tasks include assisting active XR projects, organization of XR equipment, repair of XR equipment, researching XR equipment and principles and general project and lab support functions. Prerequisite(s): [XR 100](#).

### **XR 277. Extended Reality II. 3 Hours.**

Students review the foundational principles of extended reality (XR) and explore intermediate applications in a variety of fields that rely on XR technology and techniques. Focus is given to wearable XR technology for enterprise and the fundamental differences between technology solutions. Students will explore XR through hands-on experimentation with intermediate level virtual and augmented reality technology. A portion of the class is dedicated to applying XR technology to a real-world project and presenting the results. Prerequisite(s): [XR 177](#) and [GV 292](#).

### **XR 292. Game Engines I. 3 Hours.**

Current game engines such as Unreal Engine and Unity provide a powerful platform for rapid development of interactive experiences including video games, real-time graphics and special effects for entertainment and augmented and virtual reality environments. This course introduces fundamental game engine topics including level creation, material construction, visual scripting, lighting, collision detection, particle systems and landscape development.

### **XR 377. Extended Reality III. 3 Hours.**

Students review the foundational and intermediate principles of extended reality (XR) and explore intermediate applications in a variety of fields that rely on XR technology and techniques. Focus is given to non-wearable XR technology for entertainment and enterprise and exploration fundamental differences between technology solutions. Students explore XR through hands-on and virtual experimentation with advanced level XR technology. A portion of the class is dedicated to applying XR technology to a real-world project and presenting the results. Prerequisite(s): [XR 100](#) and [XR 277](#).

### **XR 392. Game Engines II. 3 Hours.**

Game engines provide a powerful platform for rapid development of interactive experiences including video games, real-time graphics, special effects, and extended reality environments. This intermediate course further develops game engine topics such as working with digital assets, materials, particles, lighting and visual programming. Prerequisite(s): [XR 292](#).

### **XR 477. Extended Reality Capstone. 3 Hours.**

Students apply XR principles and technology to an advanced real-world project and present the results to colleges, Husson faculty and members outside of the University. Focus is given to implementation, simplicity and viability of the XR solution. Course is only open to XR majors at senior standing.