

## CMSC 427 | Wearable Computing | Syllabus

The course format includes lectures and mini workshops, student group projects, student presentations and project demonstrations.

The teaching methods used are emphasizing the role of human emotion, physiology and situations in the user experience explorations and form/function artifact design.

The output of the learning process is be captured in a student driven set of Wearable Computing systems artifacts that are investigating in depth the theoretical, practical and business issues raised by the wearable computing. The 14 weeks course includes the following topics:

- Emotional Design (1 week)
- Convergent Design Processes (1 week)
- Wearability Considerations (1 week)
- Wearable Sensors Networks (1 week)
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- Physiological Wearable Sensors (1 week)
- Human Aware Wearable Systems (2 week)
- Context Awareness (1 week)
- Innovation Processes (1 week)
- Marketing and business considerations (1 week)
- Wearable Communities (1 week)
- Future Mobility (1 week)
- Wearable Systems Applications (1 week)

## CMSC 427 | Wearable Computing | Rational

Wearable computer artifacts and the supporting Wearable Information Systems are an area of theoretical and practical convergence between Computer Science, Engineering, Design, Fashion and Business. Wearable systems hold the promise of augmenting the individual, increasing social interactions and promoting new computation models. For this promise to become a reality, we need to modify our perception of computing and information systems. This course explores the intellectual substance of active sensing of the body physiology, human emotion and situations and how to practically use this information as input for new types of applications in the communication, health care and cognitive computing. The course also investigates the wearable computing research agenda that aspires to transform the current computer user model that requires computer literacy into a model where the computer is human aware and is able to proactively serve the user. As the course traces the relationship between the body, fashion, technology, business and social interaction students will be asked to actively explore this trajectory and develop innovative ideas and devices around them. Weekly workshops and assignments will frame the theoretical discourse with practical form, function and design exercises while a final project will help students synthesize theoretical considerations and design practices in the wearable computing space.