

University of Pretoria Yearbook 2017

Wireless sensor networks 732 (EKS 732)

Qualification Postgraduate

Faculty Faculty of Engineering, Built Environment and Information Technology

Module credits 32.00

Programmes BEngHons Computer Engineering

Prerequisites Computer networks ERN 780

Contact time 32 contact hours per semester

Language of tuition Module is presented in English

Academic organisation Electrical, Electronic and Com

Period of presentation Semester 1 or Semester 2

Module content

WSN consist of individual nodes interacting with their environment by sensing or controlling physical parameters; these nodes have to collaborate (using wireless communication) to fulfil their tasks. The course can be structured in two parts: architectures covering single node and network architectures, and communication protocols focusing on algorithms and protocols relevant to wireless sensor networks. The latter include the physical layer, MAC protocols, link-layer, naming and addressing, time synchronisation, localisation and positioning, topology control, routing protocols, data-centric and content-based networking, transport layer an QoS, and advanced application support (e.g. security).

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