Module MA-INF 3234	**Lab Mobile Sensing Systems**		
Workload 270 h	**Credit points** 9 CP	**Duration** 1 semester	**Frequency** every year
Module coordinator	Jun.-Prof. Dr. Delphine Christin		
Lecturer(s)	Jun.-Prof. Dr. Delphine Christin		
Classification	**Programme** M. Sc. Computer Science	**Mode** Optional	**Semester** 2. or 3.
Technical skills	The students will design and implement practical solutions specially tailored to the requirements of mobile sensing systems, including programming mobile devices and the corresponding infrastructure.		
Soft skills	Organized in small teams, the students will interact and cooperate to fulfill the assignment. They will analyze the design space and make design decisions based on this analysis. The design decisions and the resulting solution will be documented in a written report and presented to other students.		
Contents	Mobile sensing systems leverage mobile phones as a new generation of sensing platforms. Embedded sensors, such as cameras, microphone, GPS, and accelerometers, are used to capture contextual information about the users and their surrounding environment. Within the scope of this lab, the students will explore and contribute to this challenging research field by addressing selected topics, such as: • New mobile sensing scenarios and applications • Reputation mechanisms to identify erroneous contributions • Incentive schemes to encourage users' contributions • Usable privacy interfaces		
Prerequisites	**Recommended:** MA-INF 3202 – Mobile Communication		
Format	**Teaching format** / **Group size** / **h/week** / **Workload[h]** / **CP** Lab / 8 / 4 / 60 T / 210 S / 9 T = face-to-face teaching; S = independent study		
Exam achievements	Oral presentation, written report (graded)		
Study achievements	none (not graded)		
Forms of media			
Literature	Burke, J., Estrin, D., Hansen, M., Parker, A., Ramanathan, N., Reddy, S., Srivastava, M., 2006. Participatory sensing. In: Proceedings of the 1st Workshop on World- Sensor-Web (WSW), pp. 1–5. Campbell, A., Eisenman, S., Lane, N., Miluzzo, E., Peterson, R., 2006. People-centric urban sensing. In: Proceedings of the 2nd Annual International Wireless Internet Conference (WICON), pp. 18–31. Campbell, A., Eisenman, S., Lane, N., Miluzzo, E., Peterson, R., Lu, H., Zheng, X., Musolesi, M., Fodor, K., Eisenman, S., Ahn, G., 2008. The rise of people-centric sensing. IEEE Internet Computing 12, 12–21. Christin, D., Reinhardt, A., Kanhere, S., Hollick, M., A survey on privacy in mobile participatory sensing applications, Journal of Systems and Software, Volume 84, Issue 11, 2011,1928-1946.		