# SensorSim: The Exposure and Sensor Simulator
# for HAZMAT Field Exercises

SensorSim is a teaching tool for interactive HAZMAT field training exercises.  Using any smartphone, SensorSim simulates chemical and radiological exposures, and handheld sensors that realistically measure these exposures. Features and benefits of SensorSim include:

- Learners perfect their hazard detection and classification skills, and outlining Hazard, Restricted, and Exclusion Zones;
- Exposure readings on the handheld sensor update in real-time as learner moves among mock hazards;
- Easy to add to existing indoor and outdoor exercises;
- Any cell phone or tablet can serve as a handheld sensor, including institutional or personal mobile devices;
- Instructor configures SensorSim (including sensors and hazards) to support activities such as leak source detection, spills, downwind plumes, entry to potentially hazardous areas, confined spaces, clearance testing and contaminated bodies of water;
- No limit on the number of trainees, trainee groups, contaminant hazards or handheld sensors in a training exercise;
- Instructors can focus on trainee assessment instead of dictating exposure levels from the sidelines;
- To aid in learner assessment, instructors can see on their mobile device what the learners see on their sensors, and receive post-exercise training reports;
- Developed with the support and cooperation of the Rutgers Center for Public Health Workforce Development, the Environmental Management Institute at Ivy Tech, the National Institute of Environmental Health Sciences, and the National Institute of Occupational Safety and Health.

SensorSim consists of a handheld sensor simulator that displays exposure values on a mobile phone, and a hazard simulator that represents a chemical or radiological leak.   Cell Podium offers two types of hazard simulators: a Bluetooth beacon placed at the source of the simulated leak, and a virtual hazard positioned in Google Maps.  The sensor and hazard are pre-configured by Cell Podium to instructor specifications, and are easily reconfigurable by the instructor to accommodate new field exercises.
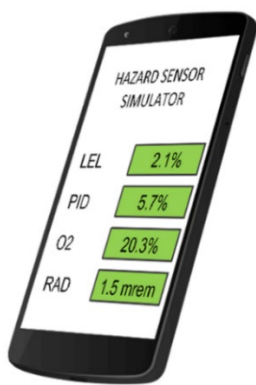


**SensorSim with Android sensor simulator and two Bluetooth beacon hazard simulators**
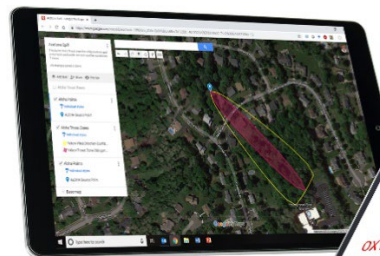


**SensorSim with I-Phone sensor simulator and GPS-based hazard simulator**