

# iPhones are musical instruments in new course and ensemble (w/ Video)

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(PhysOrg.com) -- iPhones are being used as musical instruments in a new course at the University of Michigan.

The students -- who design, build and play instruments on their smartphones -- will perform at a public concert on Dec. 9. The concert is free and open to the public.

Building a [Mobile Phone](#) Ensemble, believed to be the first such course in the world, is taught by Georg Essl, a computer scientist and musician who has been driving the development of mobile phones as musical instruments. Several years ago, Essl and his colleagues were the first known to use the [microphone](#) as a wind sensor—a tactic that enables popular iPhone apps such as the Ocarina. Ocarina essentially turns the phone into an ancient type of flute. Essl is an assistant professor in the

Department of Electrical Engineering and [Computer Science](#) and the School of Music, Theatre & Dance.

"The mobile phone is a very nice platform for exploring new forms of musical performance," Essl said. "We're not tethered to the physics of traditional instruments. We can do interesting, weird, unusual things.

"This kind of technology is in its infancy, but it's a hot and growing area to use iPhones for artistic expression."

To build an instrument on an [iPhone](#), you program the device to play back as sound information it receives from one of its multitude of sensors. The touch-screen, microphone, GPS, compass, wireless sensor and accelerometer can all be transformed so that when you run your finger across the display, blow air into the mic, tilt or shake the phone, for example, different sounds emanate.

The class demands creativity and technological savvy.

"In order to come up with a creative piece you have to engage with the technology, but in order to make technology interesting, you also have to engage with the musicality. These are really hard to separate. We're trying to teach both," Essl said.

More information: The Michigan Mobile Phone Ensemble concert is Dec. 9 at 8 p.m. in Britton Recital Hall in the Moore Building in the School of [Music](#), Theatre & Dance. The Moore Building is at 1100 Baits Dr. on U-M's North Campus in Ann Arbor.

- [Michigan Mobile Phone Ensemble](#)

Provided by University of Michigan ([news](#) : [web](#))

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