Engineering course aids developmentally disabled

K-State engineers and students are developing technology to improve the health and quality of life for children with developmental disabilities. Steven Warren and Punit Prakash, professors in electrical and computer engineering, are collaborating with Heartspring Inc., a Wichita-based nonprofit group serving students, most of whom have a primary diagnosis of autism and a majority of whom are nonverbal.

The joint effort is supported by a grant from the National Science Foundation’s General and Age-Related Disabilities Engineering program. The funding is used to teach senior design courses where engineering students develop these customized devices and software helping children at Heartspring:

- Smartphone tools and apps to help track and record children’s behavioral, physiological and cognitive development
- Wearable sensors, photo left, placed in shoes or clothing to monitor self-abusive behaviors
- A musical toothbrush that tracks brushing activity and plays different songs so children know how long to brush different areas of their mouths
- Multi-touch-surface computer games that teach children how to sort items, take turns and interact with others
- Mattresses and bed sensors, photo card front

Read more about this project at k-state.edu/media/newsreleases/jun14/heartspring6914.html