Teaching Electronics with an Arduino Microcontroller HERBERT JAEGGER, Miami University — We have been teaching an electronics instrumentation laboratory course for well over 20 years. From the very beginning the central theme was interfacing physics apparatus to microcomputers, beginning with Apple and Intel-based PCs using some form of BASIC language and later moving to LabVIEW software and National Instruments data acquisition hardware. More recently we have begun to incorporate microcontrollers into our curriculum. We are using the Arduino platform, because it is open source, very affordable, and there exists a large community to turn to for help with problems of all sorts. Programming the Arduino is quickly learned, in particular by students who are familiar with introductory-level C or Java programming. We report on the capabilities of the Arduino and how we use it in our electronic instrumentation laboratory.

Herbert Jaeger
Miami University

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