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Project-based abstract algebra using Office Hours with a Geometric Group Theorist.

In the Spring of 2018 the authors co-taught an abstract algebra course using the text Office Hours with a Geometric Group Theorist, edited by Matt Clay and Dan Margalit. The chapters of Office Hours with a Geometric Group Theorist are each written by a different mathematician. As the editors state in their introduction, each author was tasked with writing a chapter that aims to answer one of the following questions, potentially posed by an undergraduate or beginning graduate student: will you tell me about your research? Will you help me find a topic for a senior project? As such, this text provides advanced undergraduate students with a plethora of example rich topics that can culminate in semester or year-long projects.

In this talk, we will discuss how we leveraged the structure of this textbook to design and implement a project-based second course in abstract algebra. We will discuss the course structure, presentation formats, our assessment practices, and overall take-aways from the experience from both the student and instructor point-of-view. (Received September 16, 2019)