

# High Impact Small Molecule Crystallography Skills Development Through Local Undergraduate Curriculum and Regional Workshops and Schools

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Resources to develop high impact skills in small molecule diffraction data collection and interpretation can be limited by facility access, expert availability and the budgetary requirement to meet a critical mass of participants before it becomes practical to offer instruction. At the local level, shared resources between institutions, as well as curriculum approaches that incorporate scaffolding practices from first year general chemistry to senior undergraduate capstone courses, can be employed to equip trainees with skills in structural science. Looking to the regional and (inter)national level, the Canadian National Committee for Crystallography (CNCC) Chemical Crystallography Workshop (CCCW) [1] and the American Crystallographic Association (ACA) Summer Course in Chemical Crystallography [2] have now past their first (CNCC) and third (ACA) decades of instruction, and several hundred trainees have participated in these opportunities. As a post-secondary instructor, the organizer for CCCW2019 and 2020, and a past instructor at the ACA Summer Course, my talk will highlight (1) the diversity of experiences that trainees have, (2) logistical aspects of organizing and teaching in these various ventures, with a look at the transition to remote delivery for CCCW2020 amid the current pandemic, and (3) I will share some insights and results from past trainees whose research practices have been transformed as a result of these learning opportunities. [1] Canadian National Committee for Crystallography: <https://xtallography.ca/> [2] American Crystallographic Association Summer Course in Chemical Crystallography: <http://acasummercourse.net/>