City living has its downsides, one of which is less green space to branch out to grow and cultivate one’s own food. Enter the Urban Greenhouse System, developed by urban Crops, a Toronto-based SME. Urban Crops came to George Brown for help in developing a low-cost mounted greenhouse for homes, which connects to the house via a standard window. The greenhouse uses solar radiation and conventional home heating to maintain plant species. Tapping into a standard internet connection, the system includes automated monitoring and watering system for data collection. As the greenhouse project has unique design requirements, the design had to incorporate readily available stock materials and open source electronics controls.

Once developed, the greenhouse will allow urban gardeners to have a connection to plants all year round and extend food production by at least 4 months.