

# Teaching BIM to Geomatics Students

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## SUMMARY

The BIM method is changing the way Engineering Surveyors and Geomatics practitioners work. Universities are now developing new curricula for undergraduate students and for advanced vocational training. This paper will give a detailed outline on existing courses at Dublin Institute of Technology (DIT, Ireland) and at the University of Applied Sciences Dresden (HTW, Germany).

The main steps of BIM education are the following: First students have to recognise, that the model is a database – not a drawing. Then, they have to learn how to create a BIM-model from conventional sources, such as CAD floorplans. The next step is to understand how building elements are parameterised as types or families. For BIM terrestrial laserscanning (TLS) plays a dominant role as a data capture method. TLS methods and formats shall be discussed in the context of BIM. Georeferencing the project coordinate system is the next crucial part for the BIM process, which then leads to GIS/BIM integration. Engineering surveyors need to understand how to manage the setting-out of a BIM, typically model with total station.

It is important to convey that BIM is a method, not software. A proper methodological basis is very important. Working with their own BIM project, the students get to know both, BIM-software and general BIM methodologies.