# C++ 3D Assignment 3 (2.5 pts) – Ambient, Diffuse & Spec(tac)ular

Learning goal 3: Applying the ADS lighting model in OpenGL (*see lecture 3*)

## Assignment

Implement lights in the MGE.

## Grading criteria

- To **pass** this course, each assignment needs to be **finished at the 'mediocre' level at least**, and all assignments together need to result in a minimum grade of **at least 5.5 points** (e.g. 1 'mediocre' + 3 'averages').
- To **pass** a level for a specific rubric you also need to pass all the '**lower**' levels in that rubric ***and be able to explain all your implementation changes.***

### Mediocre (1 pts):

Point light implemented.
Fragment lighting implemented with ambient and diffuse components.
No hardcoded values used, instead lighting data is correctly acquired through your scene graph.

### Average (1.5 pts):

Attenuation implemented.
Specular reflection component implemented.

### Good (2 pts):

Spotlight implemented.

### Excellent (2.5 pts):

Multiple lights implemented.
Shader switches light calculation dynamically based on the Light type (DIRECTIONAL, POINT, SPOT).

**Cookie bonus**: animated or adjustable values at runtime.