# PROJECT GUIDE

The **minimum requirements** that **must be present** in the final (presented) version of the course project are as follows:

- The project should be implemented with WebGL.
- The project scene should definitely not be 2D (two-dimensional). At first, the camera should be positioned at an angle so that it can see the scene in 3D (definitely not from a bird's eye view directly from above or from side sections).
- The camera must be able to be move in 3 axes (x, y, z) and rotate freely in 3 dimensions (by direct user input or by any other user interaction).
- There must be at least 3 object types with different morphologies (shapes) in the scene (for example: {apple, pear, banana} or {car, truck, motorcycle} or {(sphere)planet, (potato-shaped)asteroid, ISS(international space station)} elements are groups of objects with different morphologies).
- At least 3 different object types (may be the same objects as above) in the scene must have different textures.
- At least 3 different object types (may be the same objects as above) in the scene must be freely controllable by direct user input or by any other user interaction (for example: these objects should not be a wall). Object selection and control can be made by mouse picking, keyboard keys and/or UI).
- There must be at least one light source and the scene must be configured in a way that it is obvious that there is light.
- The main light source in the scene must be able to be move (by direct user input or by any other user interaction). The power (brightness) of the light source should be able to be increased or decreased as desired.

Projects that meet these minimum requirements, will start from the **base score of 50 points** for the remainder of the project grading. Hereupon, groups may complete this score to a **maximum of 100 points** by:

- extra features they will add,
- careful scene design,
- being able to successfully complete the project as promised in the proposal,
- giving more effort to the project than the minimum requirements and being able to present them properly,
- good organization and distribution of tasks within the group,
- qualified final presentation.

Each group should prepare and submit a project proposal (at most **2 pages**) in which they summarize their **required and additional** features. Project proposals must contain:

- Project name
- Group members' information (name, number, email addresses)
- Brief introduction of the project (max. 100 words)

- Detailed description of the project (max. 500 words) with optional illustrations
- List of references, if any

Planned project point distribution:

- Minimum Requirements (50%)
- Presentation Delivery and Elocution + Overall Quality of the Presentation + Effective Use of Time (15%)
- Fair Share of The Presentation Time between All Group Members, Members' Individual Depth of Knowledge of the Project's Details and Ability to Answer Any Question Regarding the Project (10%)
- Demo Quality + Additional Overall Quality (25%)

NOTE: As with the homeworks, you have permission to get help from referenced sources (books, websites, sample code, etc.) for your projects. However, if it is determined that the resulting project is a copy of another work previously carried out by the group's own members or others, the project members will automatically fail the course.

On presentation day, each group should **submit a CD** (with the names, surnames and student numbers written on it) containing:

- final presentation (ppt or pptx file),
- the entire source code folder of the project and the files required for the project to run (cleaned of excess items).

The entire presentation of each group, including the demo, should not exceed **10 minutes**.

The date of the final presentations will be announced later.