ES 115 Design, Innovation and Prototyping

Techno-aesthetic detailing

Objective: Design and prototype an object based on the theme **'Movement + Amusement'.**You need to apply your understanding of **'craftsmanship'** and produce a **well-engineered** experience, with good aesthetics (not decoration).
Explanation for 'techno-aesthetic detailing' is provided in the presentation attached with the assignment.

'Movement + Amusement' (groupwise topics)											
Group numbers										**Sub-theme**	**Examples** (for understanding level of complexity; not to be copied, derive your own)
1	2	7	8	13	14	19	20	25	26	Glider	Example 1 Example 2
3	4	9	10	15	16	21	22	27	28	Toy	Example 1 Example 2
5	6	11	12	17	18	23	24	29	30	Sound instrument	Example 1 Example 2

Note: It is fine if you borrow inspiration from existing objects and modify them ; remember to incorporate three materials. It is important that they 'work' to produce movement and offers amusing experience. If readymade files for 3-D printing are used, you will loose marks.

Size: Minimum footprint of 20 cm X 10 cm X 10 cm and maximum of 30 cm X 15 cm X 15 cm (can also be rectangular/ circular in cross-section). You can the liberty of a few cm in each dimension as long as you are not consuming too much material and the details are visible.

Criteria of design (and evaluation): As explained, this assignment focuses on **craftsmanship** (technological excellence and aesthetics); value addition to the material.

Thus the following aspects need to be meticulously worked out. Visualize an **enriching experience** which can be achieved by craftsmanship; work out **robust engineering** for the following.

- Working Mechanism (engineering and calculated movements to create fun)
- Precision (surface finish, maintaining gaps, smoothness etc) perception of

quality
- Aesthetics of experience (the wow factor). Remember to avoid 'decoration' we need 'engineered' output.

Note: It is not important to focus on the user for this assignment.

Manufacturing: Make use of the 1st trade that you have learnt as a group. **Minimum three materials** need to be clearly evident in the final solution. You may use the clay studio facility. You may also bring materials used for packaging (wood/ good quality paperboards boards etc.) and add value by craftsmanship.

Use the material *judiciously*, lightweight and smart design will always perform better. Take advice from your lab in-charge to minimize material consumption, especially 3-D printing since you may not be expert in modeling.

Deliverable (each group):

● **A 30 sec to 1 min video** to demonstrate the working glider/toy/sound instrument as per your design. Try to take clear visuals in daylight and a clear sound (especially for the sound instrument). It may be a good idea to shoot live reactions of friends, who have not seen it being developed. Link to one such video

● **A 4-6 page (*.PDF) document** to demonstrate your explorations, approach and decisionmaking via sketches + 5-6 photographs of making process. There is no format / page limitation, you are encouraged to document bottlenecks faced by you and solutions you found.

● **Every group member needs to be involved** in the making; even if you do not know the trades, assist in preparation, assembly, finishing and presentation or just be present to fetch water/ snacks. The document may contain the contributions and/or photographs of contributors while working.