

Faculty: Engineering Department: Design

Engineering

Degree: Design Engineering Module name: Industrial **Design Engineering** Level: Year 2 undergraduate Academic Years: 2018-2022 Format: Portfolio pages, video, presentation Approximate number of students: 90 **Delivery mode: Online** submission of Portfolio and

video, in-person presentation **Duration: 1 minute video, 5** minutes presentation Weighting and credit: 20% individual assessment, 80% group assessment (40% subjected to tutor and peer

assessment) Module ECTS: 12.5 across two

terms

Module Type: Core

Assessment overview

Industrial Design Engineering is a second-year module where students get a chance to fully develop a product that a company could theoretically manufacture. This module follows the trend in Design Engineering to integrate project-based learning (PBL), a method that focuses on learning by doing rather than solely teaching the theory or reading. The tutors set an open-ended brief so that students have the freedom to pick a project they are truly interested in. Once they establish what problem they are going to attempt to fix, they spend the rest of the time working on their ideas and getting advice from the tutors. At the end of the module every group, made up of 4 students, presents some portfolio pages, video and a presentation to clearly convey their idea.

Design decisions

Rationale for the design of the module

The main difference of Design Engineering compared to other departments is the emphasis on project-based learning. The tutors design a brief that gives the students some freedom to pick a subject they want to work on. It is then checked by the tutors to ensure it meets the criteria of the module. By allowing the students to choose, they become more engaged because they feel a sense of ownership over the project. This makes the student passionate about their creation. The teaching itself, in terms of how to use the programmes such as Solidworks and Keyshot or how to design for assembly, is all covered within the first 6-8 weeks of the module. The rest is up to the students to decide how far they want to learn each skill. The tutors guide the students, for example encouraging them to include more details in their design or improve the quality of the video, but at the end of the day it is up to each of them to decide how deep they want to dig in that area.

Leaving it open to students in terms of how much they want to develop when it comes to certain skills helps students to time manage. They will never be able to learn all these skills in the given timeframe so there are important transferable skills to learn here. Giving students freedom to decide what they want to be 'expert' on and how far they want to develop this expertise is something that will be useful career-wise going forward. There is also an important lesson here to understand that they don't need to be expert in everything.

The ILOs for the module are as follows:

- Evaluate business, customer and user needs, including considerations such as the wider engineering and environmental context and public perception
- Develop design specifications and detailed briefs incorporating technology function and user requirements
- Generate innovative designs for products, systems, components or processes to fulfil inclusive design focused needs
- Identify technologies suitable for realising functions taking account of human, environmental, market and production criteria

Insights colour key

Educational Developer

Inclusivity

Learning Designer

Registry

Careers

Interviewee: Shayan Sharifi Role: Module Leader of Industrial Design Engineering



- Generate innovative designs for products, systems, components or processes to fulfil new needs
- Apply relevant practical and laboratory skills to verify and validate design engineering concepts
- Present concepts in physical, verbal and portfolio formats, and communicate with stakeholders
- Work effectively in a team and be aware of roles, group dynamics and team working

There is very little memorisation in this course; instead, the focus is on "learning by doing". This method internalises the learning more because it works by trying something out and observing whether that approach is valid or not. The students intake knowledge through a flow of experiences, that create memories, and they then remember what method works best for the result they are aiming to achieve. The students receive comments to validate their creations and suggestions on how to improve them, but they are not told exactly how it is done. This is firstly because the team want to promote independent learning from the students and secondly because all the projects are very different, and they all have their own needs. Another reason why flexibility to create deviating ideas amongst students is allowed is to create a sense of community. The participants in the course feel like they are amongst other designers coming up with cool ideas and they can all learn from each other.

The module is structured to last two terms. Each student gets to pick a partner they want to work with. Each pair is then combined with another pair by the tutors and the groups of 4 are formed. This method of forming groups means every student can work with someone they are already comfortable with and with two new people. The feedback from students regarding this way of making groups was very positive.

At the start of the project, the students decide what user group they want to study. Once this is decided, they all go and interview their user group to determine what problems these people are facing. After a couple of weeks of interviews and extracting insights, each group prepares a short presentation for a formative assessment with the tutors. After this 5 mins presentation, done as a group, the tutors give the students feedback on their findings and

inform them on which specific problem they should aim to solve. Each person in the group develops a potential solution and by the end of the term they all individually create a concept booklet. This is submitted as a summative assessment worth 20% of the final grade.

The principle of allowing an element of choice in assessment, in this case a user group to study, is a good one for several reasons: it makes for a more student-centred approach to assessment; it is more inclusive by empowering students to work on areas of importance to them; and it is fosters independence. A caveat is that the extent of the choice needs to be considered carefully depending on the level of the students. If students have less insight into the subject/discipline, or are at an earlier stage in their learning, choice may feel overwhelming. In this case, it can be useful to provide a level of scaffolding. Here this is done through tutor feedback and a steer where to take the project. An alternative approach could be giving a few options to choose from, or giving some examples of choices made in previous years.

The following term the members of the group get back together, and they pick one of the ideas that each person has come up with. There is another formative assessment with the tutors where the group explains their rationale for picking the idea they have decided they want to go forward with. After hearing the feedback from the tutors, they can then either stick to that idea or pick another one. After everyone agrees on the idea which will be developed until the end, the students split the tasks and get on with the project. By the end of the second term, as a group they must produce a fully functional looks-like and works-like prototype, an explanatory 1 min video, a short 5 mins presentation to explain the idea and a 40-page portfolio of the idea including the user research, the insights found, the several iterations of the design, the bill of materials, the dimensions of all the pieces, a manual on how to put them all together, the company they are catering towards and how it fits with their range of products. Essentially, by the end of the project, the team could perfectly go to the company they have studied and pitch them the idea and how to manufacture it.



By coming up with individual solutions and then coming together to choose one, students develop their pitching and influencing skills and the ability to defend own ideas. Showcasing the product in different formats, including a video us also is reflective of professional pitches.

A video can be a very innovative form of assessment that allows students to showcase the content and their skills in a more creative way. An important consideration needs to be given to explaining to the students what the requirements are for a successful video and provide some scaffolding as to the software that can be used to create those videos. It also needs to be clear in the assessment criteria whether the quality of the final output be assessed and on what basis.

Being able to present it well is essential because it makes it more appealing to many other people rather than just the person with the idea. Creating a video that connects with the audience is a much stronger and quicker way of explaining the idea than reading about it. The portfolio pages are also very effective at displaying the details of the idea. The combination of both helps a lot with quickly sharing the idea and the output or capabilities of that student. A final presentation also teaches the students how to present and pitch their ideas.

With presenting, especially in cases where every student is expected to present, some considerations have to be given to adjustments for students who might not feel comfortable to present on video. A short presentation shouldn't be challenging to many students yet, some students, for example those with severe autism, might struggle. A video is already more inclusive than alive presentation but incorporating just audio can be another alternative. Providing students with choice is providing them with the option that suits their learning best or limits the impact of their disabilities.

This method of assessment is also extremely useful for the students as they are preparing to go into their placements in third year. Most of the artefacts that they produce or the coursework they must submit is reusable. The format is in a way that it can be extracted to create a personal web page or items that easily explain what they are capable of. In case the employers are unsure what the subject matter is, they can glance at the work done and understand what skills the student has.

Rationale for in-person delivery

This module is structured in the following way; 50 hours of classes + 20 hours of supported project

coaching (tutorials) + 8-10 hours of self-study per week. It is taught mostly in person. This allows students to receive feedback a lot easier and quicker as they can simply raise their hand during the tutorials and ask for help on whatever they are currently working on. The presentation at the end of the term is also done in person. The reasoning for this is that the group must show how the product works and to do so, they must be there in the room. The videos and portfolio pages are submitted online due to the nature of that content. This also allows students to easily share it with potential employers or whoever is interested in their idea.

Having a more dialogic approach to feedback with opportunities for discussion around the project is a feedback approach that is well aligned with facilitating student learning. While educationally beneficial, it is often not recognised by students as feedback as the boundaries between learning and feedback are very much blurred. It is therefore useful to discuss with students the approaches to feedback that will be taken and encouraged, to establish common understanding of what feedback on the module will look like in practice.

Fit with other assessments and the programme/module

As mentioned at the beginning, Design Engineering is a department that focuses heavily on project-based learning (PBL). This means many of the modules use a similar type of assessment method as this one. Subjects such as Gizmo (physical computing) or Human Centred Design Engineering also require students to design an explanatory portfolio with the path that was followed in order to reach the final design, build a prototype and give a presentation at the end of the term displaying the new device. In Gizmo however, the final device does not need to have a useful function, its only purpose



Peer assessment is a valuable learning process both for the giver and receiver of the feedback but can also be quite challenging from the point of view of student engagement. Appropriate student preparation for this task is key and it should centre around understanding of assessment criteria and principles of effective feedback. This is even more so the case if marks are involved. As well as being introduced to assessment criteria and rubrics / mark schemes ahead of time, it is beneficial to allow students to use these tools to assess exemplars of students' work with different strengths and aspects for development. You should seek permission to use anonymised exemplars from the originator or create examples based on typical student work. Peer assessment can, more simply but no less effectively, involve students giving each other feedback and no marks. This still has the educational benefit of requiring engagement, practice giving feedback and a useful amount of insightful feedback for each student. It avoids student concerns about the fairness of peer assessment.

In any module that relies heavily on group work it is important to establish common ground rules around group work as well as to be alert to where a tutor might need to step in and reassert rules of engagement.

is to demonstrate that the students have learned how to build the mechanism. Industrial Design Engineering is sort of the continuation of Gizmo, but in this case the product must be practical.

Peer Review

Industrial Design Engineering has a peer assessment at the end of the module, using WebPA. This allows each team member to anonymously rate how well each teammate has completed their job. The way it works is by awarding each student in the group a grade between 1-5 on how much they have worked on the project (1 being the lowest and 5 the highest). Each student must add a small comment about each of the other group members to explain the reasoning behind the number grade. This incentivises everyone to work a fair amount so that they do not get a lower grade due to a lack of involvement in the project. Once the surveys are handed in, the tutors read through all the comments and determine how much the grade of each student in the group should be altered. Students understand that they have different work ethics to each other, and group members should only all receive the same grade if they have all worked the same amount.

Working in diverse groups where students might (or might not) declare some learning difficulties can affect performance and influence peer marking. For example, an awareness that not everybody should be able to keep an eye contact for an extended period of time or that not everybody will be able to express themselves clearly and verbally because of 'labelling problems' (I.e recalling of known information on the spot quickly). As much as you want to ensure standards of professional competence are maintained, there should be an awareness in the student group (as with the teaching staff) that there are certain things that shouldn't be marked heavily down because they could be a part of neurodivergent condition and there should be sensitivity given to these individuals.

Practicalities

Preparing students for assessment

All the basic material needed to carry out this project is taught by the tutors in the first 6-8 weeks. Students are taught various skills including how to create their 3D models and render them, how to create an engaging video, how to design for assembly, etc. After that stage, students must apply their knowledge and try out different methods to reach the desired outcome. This is the great thing about PBL instead of learning through memorisation, students learn through experiences. Once you try to make something, and it either does or does not work, then you will remember the outcome of that attempt for a long time. If a student is stuck, they can always ask one of the tutors or GTAs (graduate teaching assistants) during the tutorial sessions which occur once a week. Students also use past examples as a guideline to determine what a good video or portfolio should look like.



A part of preparation for group work assessment should be preparing students to successfully work in groups. This can be done through allowing students to get to know each other in designated sessions, with a scaffolded requirement to negotiate ground rules. To enhance this formative process, and take advantage of the groups' intentionally diverse nature, students could be encouraged to consider the intercultural learning potential when negotiating ground rules – e.g. how are values around group working and contribution and practical approaches influenced by background and culture, as well as previous experience? Could each student offer a ground rule that reflects their values, to be refined as a group? Setting ground rules should go beyond practical considerations and take into account the crucial emotional dimension of learning. e.g. what enables individuals to feel confident and comfortable enough to contribute to a discussion or decision-making? Is turn-taking a good idea initially? Negotiated ground rules could them be used to inform peer assessment of group working. Some examples of useful group forming activities can be found here.

When introducing group work some consideration needs to be given to how students with specific learning needs can be successfully participating in group interactions. All students involved should benefit from inclusive practice this means that inclusivity considerations can be embedded within standard practice around preparing students for group work. This can be done through discussion around the allocation of roles and better understanding how others, including those with specific learning needs such as dyslexia, autism, dyspraxia etc learn and communicate. Individuals should be mindful of that and think about the delegation of individual tasks that are appropriate to what individuals can do. Therefore part of preparation for group work is considering how others can be mindful and empathetic towards other group members.

Marking arrangements

As the deadline for the assessments get closer and closer, drop-in sessions are organized where students can voluntarily speak to one of the teachers and ask for advice. The presentations are scheduled a day after the deadline for the portfolio and video, so by then all the groups have pretty much finished creating content. The presentations then take place throughout a whole day. Each group comes into a room with the two module leaders and two GTAs. They have 5 mins to explain their idea and show how their prototype works. This is continued by 2 mins of questions from the examiners. After the whole process is complete a WebPA (online peer assessment) is conducted to establish how much each team member worked. Thereafter the tutors that are qualified to give out grades review the whole submission of each group, include the WebPA and their own assessment, and finally they provide a mark.

There are certain main elements which every group must include. There is a marking criterion for Phase o1 (students work mostly individually) and Phase o2 (students work mostly together). Each element in the marking criteria can either "fail to meet the expectations", "fully meets expectations" or anywhere in between. The marking criteria page is shared with the students at the beginning of the project so that they clearly know what is expected of them regarding each aspect of the project.

Figure 1: Examples of Phase 01

Marking Criteria	Fails to meet expectations	Fully meets expectations
Initial User Research Approach	poorly chosen, narrow, disorganised, unjustified, one-dimensional, poorly managed	dynamic, creative, responsive, well considered, well communicated, good use of team resources
User Research Assets	gathered very few assets of limited worth, very narrow, data poorly captured and presented	rich and extensive curation of illuminating multi- media research assets, well presented
Research Insights	poorly developed, unjustified, one-dimensional, lacking creativity, poorly related to research outcomes	evolved and developed, closely tied to research outcomes, clearly communicated, well justified, creative, sensitive, subtle
Product Opportunities	none of the 3 proposed 'Product Opportunities' are well matched to user needs or market context	three compelling, innovative, well justified and well communicated 'Product Opportunities'
Market Assessment	poorly presented, superficial, basic, based on questionable data, of limited practical use, without references	insightful, clear and well summarised initial analysis and presentation of market context and opportunity

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Assessment criteria for pass/ fail assignments need to clearly distinguish between a piece of work that meets expectations (even at the basic level) or does not meet expectations. If a broader range of grades is used (e.g. A, B, C and corresponding percentage) then the marking scheme should clearly unpack what meeting expectations at different levels means for each of the criteria. This helps markers to differentiate different levels of performance and also helps students understand what is expected better.

Figure 2: Examples of Phase 02

Boards Marking Criteria	Fails to meet expectations	Fully meets expectations
Performance Specification	lacking detail, poorly researched, unrelated to test data, lacking calculation, not appropriate for target function	rigorous, well-reasoned, based on sound test data and calculation, clearly appropriate for target function, sets measurable performance targets that can be tested against, applies appropriate framework
Detailed Part Design	Part design does not sufficiently account for process factors and requirements, lacking significant detail	Rigorously detailed part design with appropriate tolerance control that reflects requirements and limitations of selected production process
Approach to Prototyping	Processes poorly researched, reasoned and implemented, many significant factors overlooked	Well researched and selected processes executed to a high standard to ensure quality outcomes that meet the requirement
Production Data Package	Data package does not align with conventions and standards, lacks detail, contains errors and significant oversights	Thorough and efficient communication of full assembly and part requirements in line with standards, clearly defining all details required to implement final product costing and manufacture
Product Compliance	Inadequately researched, poorly implemented and reported compliance requirements	Thoroughly researched requirements for target market, requirements well identified and reflected in the product design, part specification, packaging, user guide and warnings, well reported

Figure 3: Examples more directly related to the assessed content itself

Visual Presentation Materials	disparate and poorly executed visual presentation materials offering no clarity in support of key messages	Coherent, consistent and well executed, augmenting key messages throughout and bringing content to life
Video Assets	Video assets are not compelling or well- structured and do not convey sufficient detail	Video assets bring the content to life, have a well- structured narrative, capture and convey compelling content
Presentation Craft	poorly timed, poorly curated, unrehearsed, jumbled, rushed, incoherent	engaging, well-structured narrative, good pace, covers all key points, well-rehearsed, compelling and polished

To mark the portfolio, video and presentation the tutors go through all the elements in the marking criteria and determine how well each of these has been completed. During the presentation the tutors also ask questions to clarify any doubts they have about the product. It might be related to any of the elements in the marking criteria. For example, the group might be asked why they chose that specific shape and colour for the product, or why they decided to use the material, they picked.

When asking students to produce a video it is important to recommend software choice that has a simple learning curve so that it doesn't take the time away from what they should be focusing on demonstrating in the ILOs and marking criteria.

Distribution of mark weightings

This module aims to teach students how to go about building a prototype and communicating their ideas. Preferably, the product must work by the end of the term, but even if this is not the case, the students can still get a decent mark at the end. 35% of the final grade is allocated to the process of generation of concepts and market research carried out in the first term. In the second term another 35% of the mark goes towards the portfolio. Essentially, the project assesses how well the students can communicate their product; of course, this is easier if it actually works. Of the remaining 30%, 15% is dedicated to the presentation and video. The final 15% grades the build and functionality of the product. Sometimes the device breaks the night before the presentation and students should not be heavily penalized for that. This is the purpose of having a video, a way of displaying the idea and the product working. It shows that the idea is viable and has potential.

Preparing assessors for marking assessment

The module leaders are part of designing the assessment criteria. The GTAs are used for support during the tutorials as they are well informed regarding what is expected of the students.



Imperial College has two training programmes before the GTAs can get involved in the marking. The first one covers learning and teaching in higher education. After this one, the GTAs can help the students but without influencing them too much. The second programme covers assessment and grading. Once those two are both completed, the GTAs can also grade the students' work. The grading is done by individually assessing each item in the marking criteria and so establishing where on the spectrum each team lies.

Feedback, be it formative or summative, is a powerful learning tool. It is important to provide students with balanced feedback that outlines what they did well, and any areas for improvement. It is quite often an assumptions that if students did something well it means they must understand why but it is not always the case. hence reiterating in feedback the strengths linked to the assessment criteria is useful for student future learning, as well as can have a positive emotional impact on the students. The most important aspect of feedback is for it to be actionable – this involves quantity that allows students to take it forward without being overwhelmed and with clear points that they can apply in the future.

Feedback on assessments

Feedback itself is a lot more important than the mark. In this module the teachers provide an extensive one-page of written feedback. It comments on the parts students have done well and the parts that could be improved. Feedback must not always be excessively critical. The positive aspects must be acknowledged so that the students know what they have done properly. The rest of the comments focus on why the group received that mark, what parts need improvement and how to do it better. The feedback must be elaborate, single worded feedback is meaningless. This doesn't always happen in class because of number of students and limited amount of time, but in writing more details can be given.

Software used

The students can freely pick what software they use to produce the visual assets. Some students utilize Adobe apps such as InDesign or Illustrator because the university has bought them the license and those are the softwares used in the industry. Other students use Figma due to the ease of online collaboration when using this software.

In terms of the hardware, students must buy all the required materials and electrical components themselves. Every project is very different hence each team is given a £200 budget to spend on whatever they need. The students must purchase things themselves but at the end of the module they hand in the receipts and the refunds carried out. Everyone in the cohort also has access to all the machinery available for Design Engineering students at Imperial including, 3D printers, laser wood and acrylic cutter, spray paint machine, etc.

Online adaptations

During Covid-19 students did not have access to all the machinery available at the Imperial College campus. This meant that the students could not properly build the physical prototypes required. Everything else could be done online. As a result, the course was amended to focus more on digital prototyping instead of the real-life one. Students had more time to develop their CAD models and renders. FEA (finite element analysis) and CFD (computational fluid dynamics) simulations were also introduced to see whether products could sustain the load or performance required. This part was kept on for the following years but it's weighting was slightly reduced to give the functionality of the product more priority again.



Another amendment to the course was the addition of a branding section. Each team researches a company which could incorporate their concept product. Once the company is established, the team must brand their product according to that company, using similar colour schemes and brand language. Students must also carry out market research to see where their product could be positioned. This part of the course was kept on for the following years as it received a lot of positive feedback from the cohort that tried it out during Covid-19 because it gave the students a reality check. It is a great opportunity to simulate what the product ideation process in an engineering company would be like. Students must also validate the feasibility of their idea being integrated in the company's portfolio.

Alignment with accrediting body

When trying to design a module there are certain learning objectives that are a part of the university experience for the students. There is a chart that describes the different skills in different parts of the industry. The learning objectives of this course connect with the code from that chart. For example, problem solving, that is not something that can be taught, but it can be practised. When carrying out a project the students are constantly faced with unexpected problems they must solve. It is similar with communication. This skill is difficult to teach, hence, we make students create a video that can communicate their idea.

Advantages of the assessment type

- This is a very hands-on and engaging approach to learning.
- Students learn how to properly communicate and present their ideas. The portfolio and video are a very quick and effective way of displaying a concept product.
- The students get a sense of ownership over a project which can later be introduced into their personal portfolio.
- Many different transferable skills being learned
- Excellent alignment with employer expectations of student competencies, post-graduation
- The above makes the assessment <u>authentic</u> in nature. Watch this <u>video</u>.
- <u>Learning how to deal with conflict within groups</u>
 and understanding the different mechanisms for

- collaboration is important. Similarly, developing <u>leadership and followership</u> skills is also important. Watch this video.
- The size of the project does not allow students to procrastinate. The fact that you need to try-out mechanism to see whether they work or not, then let the paint dry, or fix a broken part. The nature of this type of work means that students are working continuously throughout the whole term. Students learn how to manage their time and set milestones to achieve throughout the term.
- The assessment gives students an opportunity to build up their portfolio and prepare for the Year 3 placement
- Although some of students struggled to find enough content to fill in 40 pages of portfolio, they still think that project-based learning is a fabulous teaching method as it gives student freedom and independence.

Limitations of the assessment type

- The feedback from students is that sometimes it can be too much work over the whole term. This can cause an ongoing stress on students.
- The challenge with assessing projects that differ so much from each other is that there cannot be a written exam to determine who knows more or less, because each student decides to focus on one aspect. Therefore, the assessments we set are related to how well can you present an idea. There are a lot of good ideas out there, but they only make sense when they are communicated well, and they are shared with others. Otherwise, they just remain an idea and untouched.
- Some students mentioned that they would have wanted more feedback during class contact time.
 The problem is that there is literally no space in the schedule to fit more contact hours with the tutors. A possible fix could be to have more tutors going around so that groups can spend more time with them during tutorials.
- Some students mentioned that the brief was too long, so next year the key points will be summarised at the beginning.
- There were students that believe they were receiving contradicting feedback from each tutor. This is something that the module leader has to carefully look out for. If the feedback given out by the teachers is not aligned, it can end up creating a lot of confusion amongst the students.



 As with any assessment where group work is involved there is a danger of unequal distribution of workload.

Advice for implementation

- It is advisable to implement a combination of formative and summative assessments. The formative assessment should happen before summative, so that students are checked in with. They can get feedback before their grade is awarded. If the summative happens too soon then students only aim for a high mark. By introducing a formative assessment mid-way through term, students have the chance to produce something realistically confirming they are on the right track, but also giving each group a chance to shift the trajectory of the project if needed.
- Learning about teamwork is part of the module.

 In a team some people are more dominant than others. By allowing each team member to submit their individual concepts without being judged by the rest of the team, the quieter team members can also be heard. If you allow enough personal influence everyone will get as involved in the project and it won't feel like the whole group is simply doing what one person thinks is right.
- The way to combine the two points made above is the following. Firstly, the whole group must go through a formative assessment which consists of explaining the reasons why they have chosen a specific user group. Later, each person in the group submits a summative assessment including their solutions to the problem the group is attempting to tackle. Between the team members and the user feedback, one of the 4 solutions is picked after a formative assessment with the tutors. Finally, the group gets back together to build the solution. The last summative assessment is to give a presentation and submit the portfolio and video. This method results in a product that involved everyone in the group.
- Some of the feedback received last year was to try to reduce the amount of study. Many students felt like they were spending a considerably larger amount of time on this module compared to other modules. To combat this issue, the team reduced the lessons and spread them throughout the term so that students had more individual working time.

- Whenever the tutors had too much influence over the project then students are at risk of losing interest. For example, when it comes to picking out one of the 4 ideas, if this decision is made as a group, then everyone is motivated to pursuit this idea. If the decision is made mostly by the tutors, the students feel like they have not chosen this path and they will feel less passionate about it.
- The assessment closely aligns with the requirements of the workplace. It is useful to contextualize this to the students though and making them aware that while the aim is authenticity, practices might differ across different workplaces and job roles. This can be especially useful for managing expectations around placements where students will not necessarily have an opportunity to make their own products.
- It is useful to consider what is more valuable –
 peer feedback or peer marking or both. Thinking
 of the pros and cons of each and considering
 the end goal of learning on the module can help
 decide on the most appropriate route;
- Include inclusivity considerations when it comes to group working, for example include and explicit discussion of how specific learning difficulties could affect group work to help students develop empathy towards those with different working patterns and styles;
- This discussion will also benefit peer marking and peer feedback activities, ensuring others are not marked down for things that are beyond their control
- While important for all assessments, for 'non-traditional' approaches it is particularly important that both staff and students are clear on the purposes, benefits and expectations involved. Appropriate opportunities for formative assessment and feedback built into the programme / module design can be key in this;
- Some believe that students take peer assessment more seriously if they are required to give a mark, so if you choose to adopt that approach, like staff, students need preparation for peer assessment. As well as being introduced to assessment criteria and rubrics / mark schemes ahead of time, it is beneficial to allow students to use these tools to assess exemplars of students' work with different strengths and aspects for development. You should seek permission to use anonymised



<u>exemplars</u> from the originator or create examples based on typical student work. Watch this <u>video</u>.

- For all assessments but especially for more creative ones it is important to have a clearly defined marking rubric that is communicated to the students
- Offer some recommendations for software to use to produce a video to direct student attention to the content and demonstrating skills contained in the ILOs
- Ensure that you reach joint understanding around feedback practices on the module and help students develop strategies to make the most out of different sources of feedback they will encounter during their project work