THE GUILD
Principles for Online and Blended Learning

The College's 2017 Learning and Teaching Strategy (LTS) outlined an ambitious vision and schedule of activities designed to position the College as a world-leading provider of STEMM education. That vision required us to provide an education that is *evidence based, student centred, active, inclusive* and *digitally enhanced*. The COVID-19 pandemic has not altered these principles but provides us with an opportunity to innovate in terms of being 'digital enhanced' to ensure our campus-based educational offer is *flexible* and *pedagogically driven.*

These six underpinning principles of our online and blended learning are outlined below, along with in each case a generic illustration of how the principle can be applied in practice, an Imperial case study and web links to further case studies and information.

This document should be read in conjunction with The Guild's 'Threshold Level Specification for Online Modules' recommendation document.

1) Evidence Based

We should use the existing literature on evidence-based higher education and build on the many examples of good practice presently available at Imperial. Modules should therefore be designed following approaches that have been shown to enhance learning or which explore new approaches that are anticipated to enhance learning and engagement. We will evaluate, research and publish the outcomes of our innovations in education and thus contribute to the body of knowledge in global higher education.
- In Practice: This could involve incorporating pedagogic approaches such as Active Learning (Bonwell and Eison 1991), the regular provision of feedback (Hattie and Timperley 2007) and ideas from Communities of Practice (e.g. Pyrko, Dörfler and Eden 2016) into the design of an activity sequence.   For example, the effectiveness of an out-of-class reading could be enhanced online by embedding this reading into an activity sequence such as: pre-reading questions → reading → feedback → discussion → output → feedback. Similarly, taking measures to build team cohesion when implementing Team-Based learning (TBL) (*cf*. Charalambous 2020), and keeping videos short to maximise student attention (*cf*. Brame 2016).
- Case study (Medical Biosciences): Online Team-Based Learning (TBL) with Microsoft Teams
Useful Link: CHERSNet

2) Student Centred

We should build a strong scholarly community with our students at the centre, supported by teaching, research and educational support staff. Students should be welcomed into the Imperial community of world-class research and gain the academic and professional skills to contribute actively to the Imperial research mission. Our educational offer should be designed based on the student learning journey.
- In Practice: This could involve online students being given access to support while they perform out-of-class activities. For example, *via* discussion boards, office hours with teaching staff, and access to teaching assistants and peer communities.
- Case Study (Aeronautics): A Novel Learning and Self-assessment Platform: Interactive, Holistic and Student-centred.
- Useful Link: StudentShapers Projects

3) Active

There is extensive evidence that standard *ca*. 50 min didactic lectures are ineffective online. We must therefore move away from primarily lecture-based sessions and embrace interactive teaching. Student engagement with teachers, with each other, and with the world outside Imperial will be key components of the educational experience.

- In Practice: This could involve the adoption of experiential activities together with regular interactive elements such as quizzes and small items of formatively assessed work. This should be based on authentic activities of our disciplines, where activities are valuable and fun for future and current professionals in the discipline.
- Case study (Chemistry): Introduction to Molecular Modelling: Interactive Workshops
- Useful Link: FoNS Remote Teaching Case Studies

4) Inclusive

We should foster a supportive, inclusive and diverse community where different backgrounds and cultures in staff and students are cherished and celebrated. Through interaction with peers working in different environments and with different challenges we can prepare our students for an increasingly diverse and complex future work environment.

- In Practice: This could involve incorporating group work and peer to peer tasks that encourage the development of an active online learning community. Careful consideration should be given to the make-up of groups, location of group members and the need for knowledge exchange between students on- and off-campus. As learning is more self-directed online, a clear structure is important. It is important to be explicit as to when activities should be completed and how long they should take to complete.
- Case study (Business School): Teamwork in Global Skills Development: On the Right Path
- Useful Link: Educational Development Unit (EDU) Case Studies

5) Flexible

We should embrace the opportunities afforded by the move to online and multi-mode delivery to introduce more flexibility in our approaches to teaching, learning and assessment. We should create a 21st century pedagogy that will allow students to engage with learning on campus, at home, on the move, in London or abroad, in groups, individually and whenever works for them.

- In Practice: This could involve the adoption of online asynchronous activities which allow students to study at their own pace or the adoption of multi-modal classrooms which allow more student choice regarding how they attend class.
- Case study (Earth Science Engineering): A Virtual Field-Trip to the Pyrenees
- Useful Link: VPE Innovations in Learning

6) Pedagogically Driven

The use of digital technology in multi-mode teaching affords unique pedagogical opportunities. We should capitalise on the technologies used to deliver online and blended teaching to enhance a sense of collaboration and community between our students wherever they are located; to apply innovative, interactive teaching techniques; and to create an international classroom. We should adapt the physical spaces on campus to make them well equipped for new learning and teaching, and for building an inclusive scholarly community.

- In Practice: This could involve the adoption of simulations and virtual labs, groupwork enhanced via digitally enabled communications and interactive materials.
- Case study (Life Sciences): Applied Molecular Biology: Interacting *en masse*
- Useful Link: VPE Technology for Learning