**Supplementary Tables**

**Supplementary Table 1.** Comparison of teaching methods in PATH3205 and PATH3206 in pre-COVID (2019) and COVID times (2020, 2021)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **PATH3205** | | **PATH3206** | |
|  | **2019** | **2020/2021** | **2019** | **2020/2021** |
| *Teaching activity* |  |  |  |  |
| Lectures | Face-to-face,  Recorded in Echo360 | Live Online  Recorded in MS Teams | Face-to-face,  Recorded in Echo360 | Live Online  Recorded in MS Teams |
| Tutorials | Face-to-face  Students work in groups | Live Online\*  Students work in groups within MS Teams | Face-to-face  Students work in groups | Live Online  Students work in groups within MS Teams |
|  | Students create communal notes using online documents | Students create communal notes using online documents | Students create communal notes using online documents | Students create communal notes using online documents |
| Practical classes | Face-to-face | Live online with MS Teams\* | Face-to-face | Live online with MS teams |
|  | Two practical classes had hands-on lab tasks | Converted to live streamed demonstrations | No practical classes with hands on lab tasks | No change |
|  | Remaining practical classes used dry lab tasks, histology with virtual slides, macroscopic specimen analysis using virtual resources | Continued as before, live online | All practical classes used dry lab tasks, histology with virtual slides, macroscopic specimen analysis using virtual resources | Continued as before, live online |
|  | Students did group work face to face | Groupwork in MS Teams | Students did group work face to face | Groupwork in MS Teams |
|  | Preparatory material offered as online resources (virtual labs, adaptive tutorials) | Continued as before | Preparatory material offered as online resources (virtual labs, adaptive tutorials) | Continued as before |
| *Assessments* |  |  |  |  |
| Continuous assessments | Moodle quizzes | Continued as before | Moodle quizzes | Continued as before |
| Assignment | In person presentation | No change in format, online live presentation | In person presentation | No change in format, online live presentation |
| Mid-term and final examination | In person invigilated examination | Online open book examination | In person invigilated examination | Online open book examination |

\*PATH3205 trialled hybrid practical classes and tutorials in 2021 where some students were onsite and others online in the first half of the course. They were later converted to full online classes due to low attendance.

**Supplementary Table 2.** Summary statistics of myExperience response rates in each year, categorized by each domain assessed

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Course and year** | **Response rate % (n/N)\*** | **Average score per feedback domain\* (Standard deviation)** | | | | |
|  |  | **Q1** | **Q2** | **Q3** | **Q4** | **Q5** |
| PATH3205\_2019 | 71.1% (54/76) | 5.13 (0.62) | 5.37 (0.73) | 5.3 (0.71) | 5.17 (0.74) | 5.19 (0.82) |
| PATH3205\_2020 | 42.3% (33/78) | 5.21 (0.65) | 5.33 (0.94) | 5.06 (0.89) | 5.09 (0.9) | 5.33 (0.84) |
| PATH3205\_2021 | 41.6% (47/113) | 5.21 (0.96) | 5.02 (0.79) | 4.4 (1.1) | 4.82 (0.97) | 4.83 (0.97) |
| PATH3206\_2019 | 45.8% (33/72) | 5.74 (0.54) | 5.15 (0.56) | 4.97 (0.72) | 5.18 (0.63) | 5.03 (0.83) |
| PATH3206\_2020 | 61.6% (61/99) | 4.53 (0.95) | 5.1 (0.8) | 4.51 (1.3) | 5 (0.96) | 5.25 (0.93) |
| PATH3206\_2021 | 52.2% (59/113) | 5.36 (0.64) | 5.44 (0.64) | 5.41 (0.59) | 5.39 (0.66) | 5.47 (0.59) |

Q1: overall satisfaction with the course, Q2: felt as being part of a learning community, Q3: feedback by teachers helped in learning, Q4: course resources helped in learning, Q5: assessments were appropriate, each domain was scored on a scale from 1 (strongly disagree) to 6 (strongly agree)

**Supplementary Table 3.** Top recurring themes in qualitative responses grouped according to calendar year and then by prevailing COVID restrictions (for both courses)

|  |  |  |  |
| --- | --- | --- | --- |
| **Grouping** | **Recurring themes** | **Number of mentions** | **Example comment** |
| Calendar year |  |  |  |
| 2019 | Positives |  |  |
|  | Course content was good | 35 | “The content is really interesting, and the teachers are very knowledgeable and passionate.” |
|  | Teachers engaged with students well | 12 | “All the lecturers cared about our learning” |
|  | The assignment task was good | 10 | “The research impact symposium assessment task was different but very interesting. It really pushed you to venture outside your  learning comfort zone.” |
|  | Negatives |  |  |
|  | Course content was overwhelming | 28 | “I believe that there was a lot of content given in a short period of time and as a result, I was left feeling quite overwhelmed and  stressed with all that needed to be completed.” |
|  | Organization of teaching activities needs improvement | 21 | “Course structure and flow of content being delivered. At times, content felt disconnected as the lectures and research impacts were  broken apart. Links between content could be made at the end though.” |
|  | Assessments and feedback need improvement | 13 | “While I agree that the quizzes are valuable as they help motivate me keep up to date with the coursework, I found the questions  were too difficult, they did not assess that we were familiar with the course content, but rather they asked ridiculously specific things  that just made me feel like it was all too hard.” |
| 2020 | Positives |  |  |
|  | Online learning is time saving | 26 | “Much more flexible, didn't have to travel 2 hours to uni for a single lab.” |
|  | Course content was good | 10 | “I have LOVED the lectures– they have been really interesting and I love how different experts have been brought in to share their  research.” |
|  | Online platforms and resources enhanced learning | 9 | “Microsoft teams was really helpful throughout the term for team meetings and practicals.” |
|  | Negatives |  |  |
|  | Lack of face-to-face (F2F) classroom experience made learning difficult | 27 | “The lack of social interaction with peers and teachers. I have found the teaching standard in Path to be exceptionally high and it is  part of the reason why I picked it as a major. Not being able to interact with my lecturers in person is a shame as it is not as natural  and personal over Teams.” |
|  | Lack of motivation, time management and boredom | 16 | “It can get really boring.” |
|  | Unstable or slow internet | 13 | “Group work became difficult, especially with making a presentation. Due to internet issues many hours were spent trying to record.  Sometimes it became difficult to communicate ideas to one another.” |
| 2021 | Positives |  |  |
|  | Course content was good | 21 | “The best part of the course was the content, it was very interesting.” |
|  | Online learning is time saving | 12 | “I found that the format for delivery (online) allowed for greater flexibility and time management on my part with other courses, assessments and parttime work.” |
|  | The assignment task was good | 8 | “The RIS was fun to work and and the final presentations were all interesting to watch. I want to specifically say that having an  mentor that we could meet with and discuss things with was really helpful in that task.” |
|  | Negatives |  |  |
|  | Lack of F2F classroom experience made learning difficult | 24 | “I'm concerned by the lack of physical laboratory experience in as much as it may relate to future employability and my knowledge or  experience in having performed certain laboratory tasks.” |
|  | Course content was overwhelming | 14 | “I felt a little overwhelmed with the amount of lectures and that they were all back to back on the one day.” |
|  | Organization of teaching activities needs improvement | 14 | “More consistent structure to the course would be appreciated, as I was regularly confused as to the sequence of activities, and which Teams channel/other platform channel I was required to be in.” |
| Prevailing COVID Restrictions\* |  |  |  |
| Increasing | Positives |  |  |
|  | Course content was good | 17 | Example provided above |
|  | The teaching activities were well-organized | 16 | “With everything online, this course was well organised and all the content was available and accessible beforehand.” |
|  | Online learning is time saving | 15 | Example provided above |
|  | Negatives |  |  |
|  | Organization of teaching activities needs improvement | 15 | Example provided above |
|  | Lack of F2F classroom experience made learning difficult | 13 | Example provided above |
|  | Assessments and feedback need improvement | 10 | Example provided above |
| Relaxing | Positives |  |  |
|  | Course content was good | 21 | Example provided above |
|  | Online learning is time saving | 12 | Example provided above |
|  | The assignment task was good | 8 | Example provided above |
|  | Negatives |  |  |
|  | Lack of F2F classroom experience made learning difficult | 24 | Example provided above |
|  | Course content was overwhelming | 14 | Example provided above |
|  | Organization of teaching activities needs improvement | 14 | Example provided above |

\*Profile for no restrictions is the same as that for calendar year 2019