**Lesson Plan Template**

***Note:*** *the candidate must engage in lesson planning and reviews for teaching sessions during the academic year.* ***For the assessment****, each candidate provides* ***four*** *completed lesson plans and reviews for a module(s) that they teach (two in semester 1 and a further two in semester 2).* ***You are required to upload outputs from your four lesson plans on the Moodle/VLE CRN 51389.***

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| **TEACHING SESSION PLAN** | |
| **Module: Mechanical Dissection** | **Level / Stage (6,7,8) Level 7/8 Year: 1** |
| **Title of session/ topic: Working Drawings and BOM Length of session: 1.5-hour lab + 1.5-hour asynchronous** | |
| **Mark the type of session:**  **Lecture ☐ Tutorial ☐ Lab ☐ Studio ☐ Workshop ☐** | |
| **Module Outcome** (What module outcome(s) is the class/session aligned to)**:**  LO2: Disassemble and reassemble mechanical systems/artefacts to better understand their function.  LO4: Effectively communicate about the function of mechanical components  LO6: Correctly use engineering terminology  LO8: Self-study and research more effectively, and reason more effectively  **Class/Session Outcomes:** Upon completion of this session, you should be able to: (Share with students e.g. Write on board /slide/ project image at beginning of lecture for students)  Define and understand professional working drawings and bill of materials (BOM).  Complete 2 working drawings and a BOM for their coursework. | |
| **Select & Prioritise Your Content:**  For the session, decide what material is used in class and what material the students should study independently and/or online. To do this, think about the material and its relative importance and prioritise and list in the appropriate quadrant.   |  |  |  | | --- | --- | --- | |  | **In Class or in a Live Online Class**  **(Support Learning)** | **Independent Learning**  **(student completes on their own)** | | **Priority**  **(Need to know)** | 1 Define and understand essentials in working drawings.  Define the important information to include on a professional drawing  Apply this knowledge to their own chosen component | 2 Have dissected their component  Drawn at least 2 parts  Watch 2 videos (one on drawings, one on BOM) | | **Supplementary**  **Learning (Nice to**  **know)** | 3  Application of these drawings in their professional career | 4  Application of this information in other modules such as CAD |   **Material in quadrants 1 and 3 typically become the focus during classes. Quadrants 2 and 4 represent material students could study themselves and use the VLE/Moodle and online learning objects to support this learning.**  **Think about how you might incorporate *Technology Enhanced Learning Tools and Blended Online/Digital Learning Objects,* that will develop students learning and engagement with the module.**   |  |  |  |  | | --- | --- | --- | --- | | Time/Lesson Stage | Teacher Activity | Student Activity | Resource Used | | 0-5 minutes/Stage 1 | **Welcome class, introduce working drawings and BOM and plan for class** | **Type in teams chat box or discuss** | **Teams** | | 5-10 minutes | **Introduce working drawings and BOM, 3 essentials of a good drawing** | **Log into Mentimeter Watch/listen/type** | **Mentimeter** | | 10- 20 minutes | **Name this view activity and correct answers** | **Activity: Use Menti to check understanding of common views in drawing** | **Mentimeter** | | 20 – 25 minutes | **Discuss Multiview representation, projection planes, centrelines, and title blocks.** | **Listen and engage** | **Mentimeter** | | 25 -30 minutes | **Introduce drawing video** | **Watch/Listen/Discuss**  **Available on Padlet for future work** | **Mentimeter and Padlet** | | 30- 40 minutes | **What do you think of this one? Drawing activity** | **Activity: Use Menti to discuss aspects of good and bad drawings** | **Mentimeter** | | 40 - 45 minutes | **BOM and Parts list** | **Watch/Listen/Discuss** | **Mentimeter** | | 45 - 50 minutes | **Introduce BOM video** | **Complete exercise** | **Mentimeter and Padlet** | | 50 - 55 minutes | **3 things you will include in your BOM** | **Activity: Use Menti to discuss their future BOM drawings** | **Mentimeter** | | 55 - 60 minutes | **Update** | **Activity: Use Menti to give me a project update** | **Mentimeter** | | 60 – 65 minutes | **Upload drawings to Padlet** | **Activity: Upload screenshots/photos of their work to date** | **Padlet** | | 65 – 70 minutes | **Schedule 1 to 1s** | **Listen and Record** | **Teams** | | |

**Teacher Reflection:**

What worked well?

I believe using an interactive presentation tool like Mentimeter worked well. This class is usually a practical laboratory class so although we are in currently in an online setting, Mentimeter encourages student interaction in a different way. I think showing the students examples of good and bad drawings helps them identify what constitutes a professional drawing. My peer reviewer mentioned the benefits of this demonstration and how clear it made the objective of the class.

What did not work well?

I think the class ran smoothly and all TEL worked appropriately. I guess being online makes it a bit trickier to monitor student progress with practical projects so I would say although Padlet is great to see student progress as they upload images of their work to it, it would be better if we were in the lab in real time.

To what extent did you address different domains of learning?

Domain 1 The Self: I addressed my professional and personal values by reflecting after this class. Prior to the class, I looked back on the previous time I gave this lecture in order to make adjustments and improve it for an online setting.

Domain 2 Professional Identity, Values and Development in Teaching and Learning: As part of the T&L Certificate I am much more involved in critical reflection, recognising that that my identity has shifted this year from a more research and engineering focus to a more educational focus. I also feel the shift to online learning has encourage more reflection in to how I put a class together and to increase engagement.

Domain 3 Professional Communication and Dialogue: I feel that I used excellent, clear and coherent communication skills during the class. I used Mentimeter and Padlet to create an interactive learning environment. This was evident as the group interacted with the TEL tools and the feedback questions.

Domain 4 Professional Knowledge and Skills: I remained current in terms of their professional/disciplinary knowledge by acknowledging that although we are creating drawings for this module, this is one activity that they will definitely use in the workplace. We discussed what relevance this activity could play in their future careers, which made this class much more interesting.

Domain 5 Personal and Professional Digital Capacity: this module is taught online when it is usually a face to face laboratory environment so it is important to recognise the potential of technology for learning impact. Using the Mentimeter and Padlet I was able to simulate a similar experience for students to interact with the content and monitor their project progression.

What would I do differently next time?

Next time it might be interesting to have students create short video of their progress half-way through the project as opposed to uploading images to Padlet. I think this might be more interactive still.