

# **Introduction of the OAA Future Classroom and Related Important Information**

## **I. About the Future Classroom**

The Future Classroom 1.0 & Future Classroom 2.0 are located on the 4th floor of the Multi-Purpose Classroom Building (originally classroom 401) and the 4th floor of the Liberal Education Classroom Building (originally classroom 406) at the Main Campus. They are currently under the management of the Digital Learning Center, Office of Academic Affairs. The design concepts of the Future Classroom include:

### **1. The introduction of advanced teaching equipment**

Future Classroom 1.0 in the Multi-Purpose Classroom Building offers 9 wall-mounted interactive touch displays, one high-end touchscreen computer at the lectern, 20 sets of VR head-mounted display and other teaching equipment.

Future Classroom 2.0 in the Liberal Education Classroom Building offers 1 moveable interactive touch display for teacher and 6 wall-mounted interactive touch displays for students.

### **2. The implementation of IoT technology**

The interactive touch display comes with the built-in digital whiteboards, internet connectivity, USB file access, and other functions that support the display of diverse teaching materials.

### **3. In line with the BYOD trend**

The Classroom supports wireless projection from various laptops and mobile phones, improving the source-switching efficiency and reducing layout issues or incompatibilities.

### **4. Creating a technology-embedded-active learning environment**

The Classroom has features such as one-touch screen broadcasting, movable desk and chair, adjustable lighting, and ample space for flexible movement, which increases interactions between teacher and students as well as student groups.

## II. List of Equipment in the Future Classroom

### 【Future Classroom 1.0 in the Multi-Purpose Classroom Building】

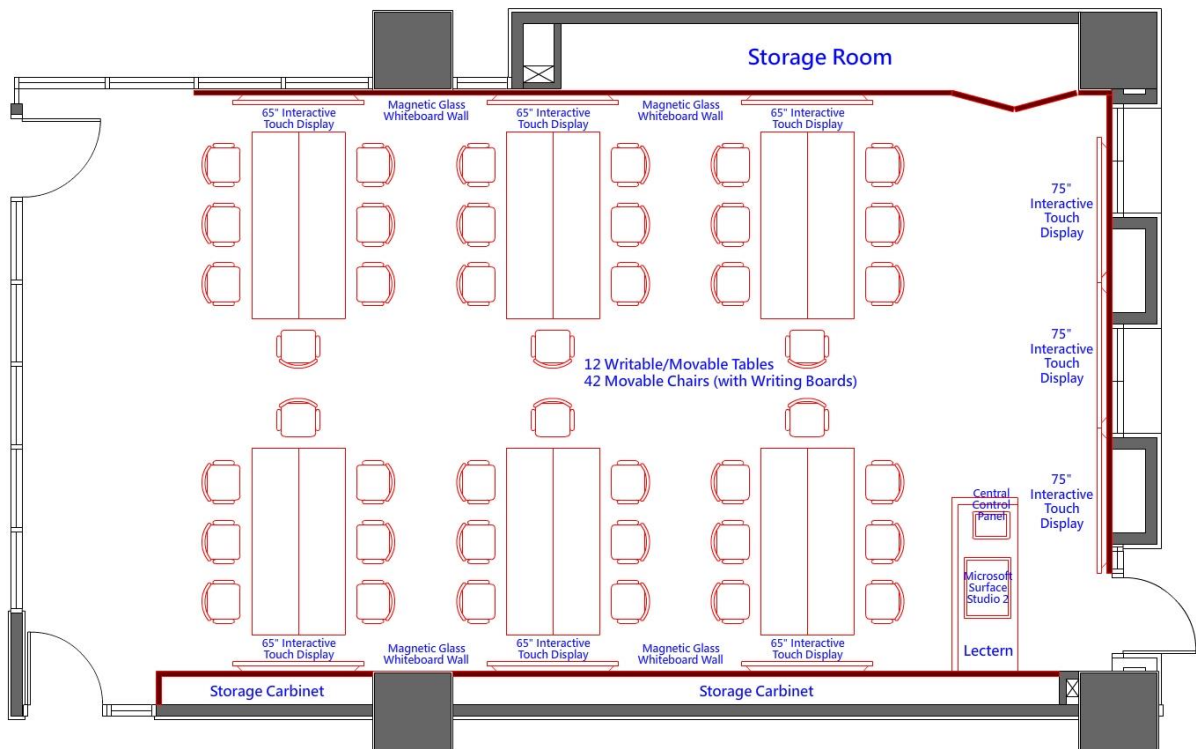
| Type                    | Item  | Quantity  | Remark  |
|-------------------------|---|---|---|
| Microphone              | Wireless Handheld Microphone                      | 5   |   |
|                         | Wireless Ear-Hook Microphone                      | 1   |   |
|                         | Wired Handheld Microphone                         | 1   |   |
| Display                 | 75" Interactive Touch Display                     | 3   | Located at the front of the classroom (side-by-side but the screen images are not continuous) |
|                         | 65" Interactive Touch Display                     | 6   | 3 on each side of the classroom   |
| Lectern Computer        | Microsoft surface studio 2                        | 1   | Win10 operating system, touchscreen   |
| Desks and Chairs        | Long Discussion Tables                            | 12  | Movable tables and the table surface can be written on (with whiteboard markers)              |
|                         | Student Seats                                     | 42  | Movable chairs with writing boards  |
| Central Control System  | iPad (embedded central control software)          | 1   | Controlling all the screen displays and the classroom lighting                                |
| Wireless Projection     | Projection Dongle                                 | 20  | 3 * 6 sets + 2  |
| VR Head-Mounted Display | VIVE Cosmos Headset                               | 5   |   |
|                         | VIVE Focus Headset                                | 15  |   |
| VR Control System       | Samsung Tab (embedded central control software)   | 1   | Controlling all the VIVE Focus Headsets   |
| High-End Laptop         | GIGABYTE AORUS 15G                                | 5   | Use with the VIVE Cosmos Headset  |
| 360° Camera             | GoPro Max   | 5   | Including charger, battery, memory card, and tripod   |
| Magnet                  | Round Neodymium Magnet                            | 40  | Used on wall-mounted glass whiteboards  |
| Stationery, Consumables | Whiteboard Markers, Whiteboard Erasers, Batteries | Supplied by the Digital Learning Center based on the amount required by the lesson. |   |

**【Future Classroom 2.0 in the Liberal Education Classroom Building】**

| <b>Type</b>             | <b>Item</b>                                       | <b>Quantity</b>   | <b>Remark</b>  |
|-------------------------|---|---|--|
| Microphone              | Wireless Handheld Microphone                      | 4   |  |
|                         | Wireless Ear-Hook Microphone                      | 1   |  |
| Display                 | 75" Interactive Touch Display                     | 1   | Located at the front of the classroom, moveable                                  |
|                         | 65" Interactive Touch Display                     | 6   | 3 on each side of the classroom  |
| Lectern Computer        | PC  | 1   | Win10 operating system   |
| Desks and Chairs        | Long Discussion Tables                            | 12  | Movable tables and the table surface can be written on (with whiteboard markers) |
|                         | Student Seats                                     | 36  |  |
| Central Control System  | iPad (embedded central control software)          | 1   | Controlling all the screen displays  |
| Wireless Projection     | Projection Dongle                                 | 12  | 2 * 6 sets   |
| Stationery, Consumables | Whiteboard Markers, Whiteboard Erasers, Batteries | Supplied by the Digital Learning Center based on the amount required by the lesson. |  |

### III. Interior Layout Plan of the Future Classroom

#### 【Future Classroom 1.0 in the Multi-Purpose Classroom Building】



#### 【Future Classroom 2.0 in the Liberal Education Classroom Building】





#### **IV. Photos of the Future Classroom**

##### **【Future Classroom 1.0 in the Multi-Purpose Classroom Building】**



**Exterior**



**Classroom view from the front door - 1**



**Classroom view from the front door - 2**



**Classroom view from the back**



**Lectern at the front of the classroom**



**3 screens at the front of the classroom**



**【Future Classroom 2.0 in the Liberal Education Classroom Building】**



**Exterior**



**Classroom view from the front door - 1**



**Classroom view from the front door - 2**



**Classroom view from the back**



**Lectern at the front of the classroom**



**Screens and the blackboard at the front of the classroom**

## V. **Overview of the Functions of the Future Classroom** ([The Introduction Video for the Future Classroom 1.0](#))

### (I) **What new features does the Future Classroom have compared to traditional classrooms?**

#### 1. **Multi-Screen Display**

The interactive touch displays can individually show different teaching materials, without the need for constant screen switching.

#### 2. **Image Transmission between Displays**

The central control system can transmit images across the 9 displays. Anywhere in the classroom can be the center stage.

#### 3. **Digital Whiteboard - Multi-Touch**

The digital whiteboard supports simultaneous multi-touch. All group members can participate the discussion at the same time, without the need for a whiteboard marker, which is clean and convenient.

#### 4. **Digital Whiteboard - Borderless Extension**

The digital whiteboard can create unlimited pages, eliminating the need for clearing the whiteboards.

#### 5. **Digital Whiteboard - Content Storage and Sharing**

The digital whiteboard supports QR code scans download and USB file saving, making it easy to take away the essential information from the lecture.

#### 6. **Note-Taking on Any Screen Image**

Any screen image on the displays, whether it is a presentation slide, web page or picture, can directly be marked or made notes.

### (II) **What are the Future Classroom's more convenient functions compared to traditional classrooms?**

#### 1. **Multi-Screen Split**

Each display can support simultaneous projections from 4 devices (Future Classroom 1.0) / 6 devices (Future Classroom 2.0), which is very convenient for group discussions.

#### 2. **Massive Writing Space**

The walls of the classroom and the surfaces of the tables can be written on with whiteboard markers, allowing every idea to be easily recorded and never lost.

#### 3. **Flexible Seating Arrangements and Lighting Adjustments**

【Future Classroom 1.0 in the Multi-Purpose Classroom Building】 All the tables and chairs can be moved freely. There are several lighting options that can be chosen and adjusted. The classroom supports various teaching scenarios.

【Future Classroom 2.0 in the Liberal Education Classroom Building】 All the tables can be moved freely.

#### 4. **Remote Teaching**

The classroom offers external webcams and wireless microphones for direct audio reception so that the teacher may walk around freely without being tied to the lectern.

## **VI. Important Information about Using the Future Classroom**

1. There is a large number of electronic equipment and tools in the classroom. In order to prevent damage and facilitate maintenance, **eating and drinking are not allowed in the classroom except for drinking water**. For classes starting at 8AM or classes during lunchtime, please consider instructing the students to comply with this requirement.
2. The classroom has adapters, button transmitters for wireless presentation system, and other small-sized equipment. Please verify that the used equipment is placed in its original storage location and that the quantities of the equipment are correct prior to the end of the class.
3. The classroom is equipped with access control and access is limited to the ID cards of Teachers and Teaching Assistants (TA) of the courses in the current semester.
4. Following above, initial use of the classroom requires more effort to become familiar with and to maintain the classroom environment. Teachers are recommended to arrange TAs or class leader to assist with opening and closing of the classroom, distributing equipment, equipment retrieval and inventory, and other tasks.

**※ Guided tours of the NTU Future Classroom are available to the faculty through reservations.**

Contact Information:

Digital Learning Center Ms. Yang

TEL: 02-3366-3367#566

E-mail: [ywc121@ntu.edu.tw](mailto:ywc121@ntu.edu.tw)