

國立中山大學機械與機電工程學系教學實驗室及機械實習工廠使用管理規則

Department of Mechanical and Electro-Mechanical Engineering, National Sun Yat-sen University Administrative Regulations for the Use of Teaching Laboratories and Mechanical Workshop

【100 學年度第四次系務會議修訂通過】 100.12.2

[Amended and approved at the 4th Department Council in 2011 academic year] 2011.12.27

【106 學年度第一次系務會議修訂通過】 106.9.28

[Amended and approved at the 1st Department Council in 2017 academic year] 2017.9.28

【108 學年度第十二次系務會議修訂通過】 109.5.27

[Amended and approved at the 12th Department Council in 2019 academic year] 2020.5.27

一、為有效管理本系教學實驗室及機械實習工廠，確保學生安全及實習設備之正常使用，特訂定本管理規則。

1. For the effective management of the University's teaching laboratories and mechanical workshop, these Administrative Regulations are laid down to ensure student safety and the proper use of the practice facilities.

二、本系之教學實驗室及機械實習工廠由本系統籌，並設有負責教師、課程助教及技術人員，相關資料應公布於各實驗室及工廠入口處。

2. The Department's teaching laboratories and mechanical workshop are to be coordinated by the Department, for which teachers-in-charge, teaching assistants, and technicians shall be designated. Details relating to the facilities are posted at the entrances to the laboratories and workshop.

三、本規則適用於因教學與研究工作需進出實驗室或實習工廠者，如儀器設備負責老師、任課教師、指導教授、助教、技術人員、工讀生、研究生及經本系許可借用者。

3. These Regulations are applicable to all those who would access the laboratories or practice workshop out of teaching or research needs, including teachers in charge of the apparatus and equipment, subject teachers, thesis advisors, teaching assistants, technicians, student helpers, graduate students, and those are permitted to use the facilities by the Department.

四、教學實驗室及機械實習工廠之所有設備是以提供本系所實驗課程授課及相關研究而設置，並優先支援本系所排定之實驗課。

4. All equipment in the teaching laboratories and mechanical workshop are set up for the purpose of laboratory class instructions and related research. Preference is given for supporting the Department's scheduled laboratory classes.

五、本系教學實驗室及機械實習工廠由本系儀器設備負責老師、任課教師、指導教授、助教或技術人員負責規劃管理，並進行例行性盤點、檢查，落實機器與儀器之維護保養。

5. The Department's teachers-in-charge, subject teachers, thesis advisors, teaching assistants, or technicians are responsible for the planning and management of the teaching laboratories and mechanical workshop, and should take charge of the routine inventory checks, inspection, and maintenance of the machines and apparatus.

六、開放時間

6. Open hours

(一) 週一至週五：依據該學期課表排定之授課教師授課時間開放外，未經許可不得擅自進入。

A. Monday to Friday: Closed except for the scheduled class time based on the semester timetable; no entry is allowed without permission.

(二) 週六、週日及國定例假日：原則不開放。

B. Saturday, Sunday, and national holidays: Closed in principle.

(三) 其他非上課時段需使用機械實習工廠者，必須通過技術認證，並先至本系系網頁填寫申請表，且經儀器設備負責老師及指導教授同意後，向管理人員提出申請通過後方能進入使用。其他教學實驗室需經儀器設備負責老師同意後，使得進入使用。符合技術認證之標準為，修習且及格本系開設之課程「機械製造實驗」，方得操作此實驗課程中實作過之機台；未於此實驗課程中實作過之機台，需參加且通過本系之機台訓練課程方得操作。

C. Those who need to use the mechanical workshop during non-class hours must have passed the technical certification, and must fill out the application form on the Department website. Furthermore, permission must be obtained from the teacher-in-charge and thesis advisor, and an application must be submitted to and approved by the administrator before they may access and use the facilities. Permission from the teachers-in-charge must also be obtained before accessing and using other teaching laboratories. To meet the standard for “technical certification”, one must have completed and passed the Department’s “Mechanical Manufacture Laboratory” course, and hence is allowed to operate the machine(s) he/she has practiced operating in the course. One must have completed and passed the Department’s machine operation courses before he/she is allowed to operate machines he/she has not operated in the “Mechanical Manufacture Laboratory” course.

(四) 使用機械實習工廠時，儀器設備負責老師、任課教師、指導教授、助教或技術人員必須有一人或一人以上在現場督導。

D. At least one of the teachers-in-charge, subject teachers, thesis advisors, teaching assistants, or technicians must be present for on-site supervision when one is using the mechanical workshop.

七、委託製作工件者，必須先至本系系網頁填寫申請表，且經儀器設備負責老師及指導教授同意後，向管理人員提出申請，經討論且雙方確認同意後，始接受委託製作工件。

7. For commissioned production of workpieces, one must fill out the application form on the Department website and obtain permission from the teacher-in-charge and the thesis advisor, and then submit the application to the administrator. Through discussion the two parties should reach an agreement before the commissioned production of workpieces would be accepted.

八、本校教職員生使用機械實習工廠或委託製作工件之收費標準依「國立中山大學共用實驗室開放使用及收費辦法」之機械實習工廠之儀器設備對外開放服務收費標準計算，相關收費細節與申請流程公告與更新於系網頁。

8. When the University’s faculty, staff, and students use the mechanical workshop or commission the production of workpieces, the service fee standards for external users of the mechanical workshop’s facilities as specified in the “Regulations Governing the Fees for Open Use of Shared Laboratories of National Sun Yat-sen University” shall apply. Relevant details about the fees and application procedures are posted and updated on the Department website.

九、使用規則

9. Usage Rules

(一) 使用教學實驗室及機械實習工廠前，儀器設備負責老師、任課教師、指導教授、助教或技術人員需先對使用者進行安全衛生宣導。各機器設備未經儀器設備負責老師、任課教師、指導教授、助教或技術人員同意者不得擅自操作，操作者必須在熟讀儀器操作手冊後，始得自行操作使用。

A. Before using the teaching laboratories and mechanical workshop, the teachers-in-charge, subject teachers, thesis advisors, teaching assistants, or technicians must give health and safety instructions to the users first. No machine shall be operated without permission from the teachers-in-charge, subject teachers, thesis advisors, teaching assistants, or technicians. Operator must thoroughly read the instruction manual

of an apparatus before operating it.

(二) 機器設備使用前應先作安全檢查；使用完畢後亦須將使用後的機器設備擦拭保養，並將實習場所整理清潔，將各類切屑、殘渣及垃圾清掃至指定場所，機器設備及電燈、空調設備電源關閉方可離開，否則得視情況取消其使用資格。

B. The machines and equipment shall be given safety check before use, and be wiped clean and maintained after use. The practice workshop shall also be properly cleaned and tidied up after use. Users shall sweep all chips, residues, and waste to designated places and switch off the power of all machines and equipment, lighting, air conditioners before leaving. Otherwise, the Department may revoke one's eligibility to use the facilities.

(三) 技術人員應進行例行性安全衛生檢查，並填具「安全衛生檢查紀錄表」。

C. Technicians shall perform routine health and safety checks and complete the "Health and Safety Check Records".

十、注意事項

10. Precautions

(一) 機器設備必須按正常程序操作，並隨時注意人員安全，遇有任何問題應儘快向儀器設備負責老師、任課教師、指導教授、助教或技術人員報告。

A. Machines and equipment must be operated according to the normal procedures. Always stay alert to personal safety. Report to the teacher-in-charge, subject teacher, thesis advisor, teaching assistant, or technician immediately in case of any problem.

(二) 進入教學實驗室及機械實習工廠應穿著任課教師規定之服裝，不得赤腳或穿拖鞋、涼鞋與短褲，進行機器設備操作時應佩帶安全眼鏡以確保安全。

B. Put on the clothing specified by the subject teacher when entering the teaching laboratories and mechanical workshop. No bare feet, slippers, sandals, or shorts are allowed. Protective glasses shall be worn when operating the machines to ensure safety.

(三) 工廠內嚴禁煙火、進食、嬉戲、喝飲料、聽音樂及從事與實習無關的活動。

C. Firework, eating, playful behaviors, drinking, listening to music, or any activities unrelated to the practical work are strictly prohibited in the workshop.

(四) 熟知各項安全設備使用方法並熟記其放置位置。

D. Be well-versed in the usage of all safety equipment and be very familiar with their locations.

(五) 工廠內除必需之實習用材料，不得任意放置有危險性物品。

E. Other than the necessary materials required for the practical work, no other hazardous materials shall be placed inside the workshop at discretion.

(六) 確實遵守機器設備使用方法，愛惜公物，讓所有機器設備保持正常運轉，發揮最大的實驗功能。

F. Strictly follow the directions of use for the machines and equipment. Cherish the public property. Keep all machines and equipment in good working condition, so that they can serve the best experimental function.

(七) 未遵守規定者，若經發現得視情節重大給與適當懲處。

G. Penalties will be imposed on those who are found to have violated the rules, depending on severity of the violation.

(八) 任何現有機器設備，未經儀器設備負責老師同意，不得任意拆解或搬移，以維持機器設備之正常化。因不當使用而導致設備損壞時，除視情節輕重送校方議處外，當事人必須負責維修或賠償。

H. No existing machines and equipment shall be dismantled or moved without permission of the teacher-in-charge in order to ensure their normal operation. If the equipment is damaged due to improper use, the

case shall be subject to the University's deliberation of penalty depending on severity, and the user shall be held responsible for repair or compensation.

(九) 不得將非相關人員帶入教學實驗室或機械實習工廠，若有特殊理由應向技術人員說明。

I. Unrelated personnel shall not be allowed into the teaching laboratories or mechanical workshop, unless a special reason is given to the technician.

(十) 逃生路線張貼於工廠出入口明顯處。

J. Evacuation directions are posted at noticeable places near the entrance/exit of the workshop.

十一、本管理規則經系務會議通過後實施，修正時亦同。

11. These Administrative Regulations are put into effect after approval at the Department Council; the same applies to any amendments thereof.

機械實習工廠之收費標準

Fee Standards for the Mechanical Workshop

收費項目 Items	收費標準 Fee Standards	備註 Remarks
立式五軸綜合加工機 Vertical Five-Axis Machining Center	本系教職員生借用 500 元/小時，委託製作 1000 元/小時 For the Department's faculty/staff/students: loan \$500/hour; commissioned production \$1000/hour 外系教職員生借用 1000 元/小時，委託製作 2000 元/小時 For faculty/staff/students of other departments: loan \$1000/hour; commissioned production \$2000/hour	1.所需之工件 材料、夾治具 及特殊刀具等 其他費用另計 (可自備)。 1. Additional costs will be charged for other workpiece materials, clamps and jigs, and special cutters required. (Users may bring their own tools.)
車銑複合機 Turning and Milling Machine	本系教職員生借用 500 元/小時，委託製作 1000 元/小時 For the Department's faculty/staff/students: loan \$500/hour; commissioned production \$1000/hour 外系教職員生借用 1000 元/小時，委託製作 2000 元/小時 For faculty/staff/students of other departments: loan \$1000/hour; commissioned production \$2000/hour	2.本系大學部 專題生借用機 台免收費，且 於專題生借用 時段方可借用，專題生借用時段公布與 更新於機電系 系網頁。 2. The Department's undergraduates enrolled in a special research project may borrow the machines free of charge, and are allowed to borrow the machines only during designated hours for them. The
機械手臂 Robotic Arm	本系教職員生借用 300 元/小時 For the Department's faculty/staff/students: loan \$300/hour 外系教職員生借用 600 元/小時 For faculty/staff/students of other departments: loan \$600/hour 不接受委託製作 No commissioned production is accepted.	designated hours for undergraduates enrolled in a special research project will be posted and updated on the Department website.
表面粗度輪廓形狀量測儀 Surface Roughness/Profile Gauge	本系教職員生借用 300 元/小時，委託製作 600 元/小時 For the Department's faculty/staff/students: loan \$300/hour; commissioned production \$600/hour 外系教職員生借用 600 元/小時，委託製作 1200 元/小時 For faculty/staff/students of other departments: loan \$600/hour; commissioned production \$1200/hour	
3D 列印機 3D Printer	本系教職員生借用 200 元/小時，委託製作 400 元/小時 For the Department's faculty/staff/students: loan \$200/hour; commissioned production \$400/hour 外系教職員生借用 400 元/小時，委託製作 800 元/小時 For faculty/staff/students of other departments:	

	loan \$400/hour; commissioned production \$800/hour	
無人搬運車 Automated Guided Vehicle	<p>本系教職員生借用 200 元/小時</p> <p>For the Department's faculty/staff/students: loan \$200/hour</p> <p>外系教職員生借用 400 元/小時</p> <p>For faculty/staff/students of other departments: loan \$400/hour</p> <p>不接受委託製作</p> <p>No commissioned production is accepted.</p>	<p>3.各機台最低 使用時數為一小時，未滿一小時以一小時計價。</p> <p>4.使用者造成工廠設施損壞或機台損壞(含刀具、配件等)需照價賠償。</p>
傳統機台 (車床、銑床、鑽床、鉗工、工具等) Conventional Machines (Lathe, Milling Machine, Drill, Benchwork, Tools)	<p>本系教職員生借用免收費</p> <p>For the Department's faculty/staff/students: loan at no cost</p> <p>外系教職員生借用 200 元/小時</p> <p>For faculty/staff/students of other departments: loan \$200/hour</p> <p>不接受委託製作</p> <p>No commissioned production is accepted.</p>	<p>3. The minimum loan time for all machines is one hour. One hour's fees will be charged for usage of less than one hour.</p> <p>4. Any damage to the workshop facilities or damage to the machines (including cutters, spare parts, etc.) caused by the users shall be compensated according to the costs.</p>