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Title 文件题目 Safety Instruction for the Engagement of UG students in Research Labs本科生参与研究实验室实验的安全指导

## Approval process 审批过程

|                    | Name   | Title  |
|--------------------|--|--|
|                    | 姓名   | 职务   |
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| Approved by<br>批准人 |  | Campus Safety Committee;   |

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| 01              | 2020-12-01               | New file 新建文件                              |
| 02              | 2025-12-01               | Update based on actual根据实际情况更新             |
|                 |                          |  |

# **Relevant departments** (select relevant departments with a "√") **相关部门** (用√勾选相关部门)

| Construction Dept. | -1           | Operation Dept.     | -1        | H.R. Dept.         | -1        |
|--------------------|--------------|---------------------|-----------|--------------------|-----------|
| 校园建设部              | V            | 校园运营部               | V         | 人力资源部              | ٧         |
| RIGS               |              |                     |           |                    |           |
| 研究创新和研究生           | $\checkmark$ | U.G. Dept.<br>本科教学部 | $\sqrt{}$ | I.T.Dept.<br>电脑信息部 | $\sqrt{}$ |
| 部                  |              | 本行教子的               |           |                    |           |

## Relevant documents 相关文件

No无

|  | Distribution mod | de (black) | 发放方式 | (涂黑) |
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### 1. Purpose 目的

Standardize the safety behavior and working requirements of the undergraduate's students in Research labs to avoid incidents of personal injury, environmental pollution and property damage. 规范学院本科生在科研实验室的安全行为和操作要求,避免发生人员伤害、环境污染和财产损失事故的发生。

# 2. Scope of Application 范围

The Standard Procedure is applicable to the management of all labs and various working activities of all UG students in Guangdong Technion-Israel Institute of Technology (GTIIT).

本标准操作规程适用于广东以色列理工学院(GTIIT)内所有本科生在实验室的管理及各类操作活动。

### 3. Responsibilities 职责

### **EHS** office:

# 环境健康安全办公室:

- Formulate the Procedure, and supervise corresponding departments to effectively implement various control measures;
  - 负责制定本程序,以及监督各相应部门对各个控制措施的有效落实;
- Collaborate with the Research labs' PIs for laboratory safety emergency training; the lab manager or administrator shall keep corresponding training records;
  - 协同实验室管理人员进行实验室安全应急培训,实验室管理员保留培训记录;

#### Lab PI:

#### 实验室负责人:

- Responsible for the work arrangement and safety of undergraduates in the laboratory; 负责本科生在实验室的工作安排和安全:
- Responsible for the risk evaluation of own lab's experiment, and assign the related experimental caretaker;

负责实验室内所有实验风险评估,并指派相应的实验负责人;



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 Regularly assess the safety awareness of lab's undergraduates and provide corresponding assistance and coaching;

定期评估实验室本科生的安全意识,并提供相应的协助和培训;

• Ensure the orderly development of undergraduates' work in research lab, and report to 他 the management when any abnormal cases occur.

确保本科生在科研实验室各项工作的有序开展,存在异常情况时及时汇报相应的管理层人员。

Lab Member (lab member - can be lab manager, researcher, graduate student):

**实验室助理**(实验室成员-可以是实验室经理,研究员,研究生)

 Assist undergraduates in all experimental facilities and equipment in lab and the corresponding safety work;

协助本科生在实验室内所有实验设施设备、以及相应的操作安全工作;

- Abide by relevant management provisions in this article, and finish the assigned work; 遵守本文的管理规定并完成受指派的工作职能;
- Supervise the undergraduates in the laboratory to complete the necessary ability training for the laboratory;

监督实验室内本科生完成实验所必须具备的能力培训;

- Timely report the abnormal conditions to lab's PI;
   及时汇报异常情况至相应的实验室负责人;
- Accompany external personnel to enter the laboratory, and prohibit the personnel to touch and operate the laboratory instruments and equipment without permission 负责外部人员进入实验室陪同工作,禁止未经许可人员触碰操作实验室仪器和设备。

### 4.0 Terminology 术语

- **PI**: Principle Investigator 首席研究员
- **EHA:** Experimental Hazards Analysis 实验危害分析
- **UG student:** undergraduate students 本科生



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## 5.0 General Requirements for Lab Safety 实验室一般安全规定:

 Every UG student will be paired with a specific mentor (lab member - can be lab manager, researcher, graduate student);

每个本科生将与特定的导师配对(实验室成员-可以是实验室经理,研究员,研究生);

- Each mentor will be responsible to up to 4 undergraduate students.
   每位导师将负责最多4名本科生。
- Maximum 8 people (students and lab members) can do experiments in the lab at any given time (wet lab space).

实验室每次最多只允许容纳8名本科生在一个科研实验室内进行实验。

 UG students and mentors will confirm in writing that they will follow GTIIT safety guidelines, they will be trained with use of equipment, and they know and accept these additional guidelines

本科学生和导师将书面确认他们将遵守GTIIT安全准则,将接受设备使用方面的培训,并且他们知道并接受这些额外准则

All UG students' experiments (experimental risk is evaluated according to experiment EHA)
must be carried out under the guidance of lab's member. (For EHA form, please refer to
the attachment)

本科生在科研实验室内进行的实验(实验危险性根据实验危害分析进行判断)必须 在实验室教员指引下进行;(实验危险评估表请参考附件)

- EHA must be finished before the experiment. Besides, it also needs to identify potential risks, determine all control measures, and understand the operation of various measures. 在实验开始前,必须完成实验危害评估、辨识潜在风险、确定所有相应的控制措施,并了解各项措施的操作;
- Lab should complete the experimental hazard evaluation according to the experimental
  evaluation form, the evaluation result can be saved in lab, and the scanned copy should be
  sent to EHS office.

For high-risk experiments, lab PI must review and approve the safety measures for the experiment, and assign an experiment caretaker for safety supervision who should follow up the whole process.



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实验室根据实验评价表格完成实验危害评价,评价结果实验室保存,扫描件发送至 EHS。

评价未高风险的实验,必须由实验室负责人审核和批准实验安全措施,实验由实验 监督员全程跟进。

 Before UG students start their experiments, the Lab member must make sure that they are familiar with the safety instructions.

本科学生实验时,负责老师必须确保所有本科生熟悉实验安全注意事项;

 The UG student can do experiments only in presence of the student assigned lab member (or a replacing lab member), during the first 2 months of training, and during training or use of new equipment.

在培训的前两个月以及在培训或使用新设备的过程中,本科学生只有在指派的实验 室成员(或替换实验室成员)在场的情况下,才可以进行实验。

 When the UG student runs an experiment, he/she can leave the lab only with permission of the assigned lab member.

本科学生进行实验期间,只有得到指定实验室成员的许可,他/她才能离开实验

- UG student is now allowed to work at night alone.
   本科学生不允许在夜间单独开展相关实验活动。
- Other experimental safety requirements must be implemented in strict accordance with laboratory safety instruction and laboratory general safety regulations, those will not be repeated here.

其他实验安全事项,必须严格依据实验室安全指引和实验室一般安全规定执行,在 此不再冗述。

### 6.0 Attachments 附件

Experimental Hazard Analysis实验危害分析表