Laboratory Notebook Procedures and Guidelines

**Scope:** These procedures apply to all Faculty of Engineering (Monash University) staff and students, full time, part time, casual or adjunct, from any Monash University campus, whether national or international, who host, conduct participate in or disseminate the results of research. Visitors to the University who participate in research are also covered by this policy.

**Exceptions:** None.

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<th>Date Effective:</th>
<th>Immediate</th>
<th>Review Date:</th>
<th>June 2013</th>
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**Responsibilities for Implementation:**

- **University Level:** DVC (Research)
- **Faculty Level:** ADR and Heads of Department

**Definitions and Acronyms:**

- ADR: Associate Dean Research
- DVC (Research) Deputy vice Chancellor (Research).

**Related Documents, Records, Databases**

- Engineering Laboratory Notebook Policy
- General Information Concerning Patents (US)

**Accountabilities**

**Development/Review:**

ADR will be responsible for reviewing compliance of the policy in conjunction with HODs.

**Approval Authority:**

Engineering Faculty Executive

**Date:**

**Data Collection and Analysis:**

ADR
Laboratory Notebook Guidelines

1. Obtaining a Laboratory Notebook
   1.1. Laboratory notebooks are to be obtained, free of charge, from the department's Resources/Operations Manager. Standard Laboratory Notebooks must be purchased from http://dynamic-stationery.com/

2. Laboratory Notebook Register
   2.1. A laboratory notebook register will be maintained by the administration staff of the department.
   2.2. When collecting a new laboratory notebook, it must be signed out by the recipient in the laboratory notebook register and signed back in upon return.
   2.3. Information on the laboratory notebook register will include the name of the laboratory notebook recipient, the supervisor(s)' name, project title, and dates of issue and return.

3. Recordkeeping procedures
   Researchers should be aware that there are specific recordkeeping requirements for patent applications filed in the US. It is important that the laboratory notebook is a clear and accurate record of research activities and that none of the information has been or could be interpreted as being falsified. Laboratory notebooks should therefore be maintained as follows:

   3.1. Set up
       3.1.1. Clearly label the front of the laboratory notebook with your name, group, title of project and where applicable, indicate the entity that is funding the project. The first and last date of entry should be written on the front cover.
       3.1.2. Maintain a table of contents as you make entries in the laboratory notebook.
       3.1.3. Separate laboratory notebooks must be kept for each project. This is particularly important where funding sources for projects are different. This ensures that intellectual property rights remain clear and where a funding body requires access to the laboratory notebook, confidential information is not inadvertently disclosed.
       3.1.4. List all abbreviations and non-standard terms

   3.2. Content
       3.2.1. Record all aspects of the research process, as applicable, including:
               o notes of meetings with other researchers;
               o conceptualisation of a hypothesis or research problem;
               o formulations of research methodologies;
               o procedures;
               o reagents and equipment;
               o data, observations and results;
               o abandoned approaches or unsuccessful attempts;
               o conclusions of the experiment; and
               o explanations of the significance of each experiment
       3.2.2. Laboratory notebook entries should be legible and detailed enough for a scientist skilled in the art to determine what has been done and why. Poor note taking prevents colleagues from reproducing your experiments and can bring the validity of your results into question. All entries should be made directly into the Laboratory notebook to avoid transcription errors.
       3.2.3. Avoid making sweeping statements or comments which could affect future patentability of your research.
       3.2.4. Computer files and data must be named with legible filenames that include the date of creation, and should likewise be noted in the laboratory notebook on that same day with information detailing their contents. The computer files must be retained on either eResearch’s LaRDS file server system or upon a storage system provided by the department.
3.3. Format
   o All entries must be in English.
   o All entries must be made in permanent ink.
   o Corrections must be dated, initialed and witnessed. Erasures and the use of correction fluid are not permitted. To delete an entry draw a single line through it so that the original entry is still legible.
   o Start each day on a separate page and date each page.
   o Pages must not be removed from the Laboratory notebook.
   o Use each page in order. Do not skip pages. If a page or a section of the page is left blank, rule a diagonal line across any unused space on the page. Where a researcher ceases using the laboratory notebook before the last page, a diagonal line should be ruled across with the first blank page, initialed and dated.
   o Cross-references: If an experiment has been described earlier, reference can be made to the earlier information instead of re-writing the experiment e.g “following the protocol as described on p3 of Ladewig Group laboratory notebook 033”.

3.4. Attachments and ancillary data
   o Attachments, including drawings, photographs, computer-generated data, pre-printed forms for standard experiments should be permanently attached to the laboratory notebook with an adhesive or non-removable tape. The researchers should initial and date across both the attached material and the page of the laboratory notebook such that it will be obvious if at any time the attachment is removed from the laboratory notebook.
   o Where additional data is too large to attach to the laboratory notebook (e.g. folded pages, pages stapled together), such additional data should be signed, dated, witnessed and reference made to the relevant laboratory notebook and the page of the laboratory notebook. In the laboratory notebook, reference should be made to the additional data. This additional data should be placed in a separate file that can clearly be identified, and stored in a secure location. Additional data should be submitted for scanning and storage with the completed laboratory notebook.
   o If additional information is electronically captured, this should be clearly identified, cross-referenced and stored in a secure server which is backed-up and archived regularly. The laboratory notebooks should contain a summary of the information in the electronic file.

3.5. Signing of Records
   o Each page must be signed by the author of the laboratory notebook at the end of each day.
   o Within four weeks of the entry, each page must be signed by a second person who has sufficient knowledge to understand the content of the laboratory notebook, but is not likely, at the time, to be considered an inventor. The witness is signing that they have read and understood the entry and that the information or experimentation was recorded on the indicated date.
   o If any changes are made after the pages are signed and witnessed, the changes must be initialed and dated by the researcher and a witness.

4. Storage and Safekeeping of Notebooks
   4.1. All laboratory notebooks are to be maintained in a secure location during use.
   4.2. At the end of each day, the laboratory notebook should be stored in a secure location. It is preferred that the laboratory notebook is stored in a locking cupboard, filing cabinet or room.

5. Archiving of Notebooks
   5.1. All laboratory notebooks that are completed or are no longer being used for recording purposes are to be taken to the Resources/Operations Manager for storage within one week. Oversight of this process will be monitored by Head of Department.
   5.2. On leaving a research group, all laboratory notebooks are to be returned to Resources/Operations Manager for storage.

6. Copies of Notebooks
   Staff, students and visitors in the faculty may be issued with
   A scanned and/or bound copy of all of their archived laboratory notebooks upon request to the department staff, as permitted by the relevant IP policies of Monash University.
7. **Access to Archived Notebooks**
   8.1 Original notebook, will not be allowed to be removed from their secure storage area, except under exceptional circumstances. Should a completed notebook be required, a scanned version will be made available upon request.
   8.2 Scanned copies of laboratory notebooks for some groups can be accessed with permission of the group's leader.

8. **Research Data Collected Outside Laboratory Notebooks**
   9.1 All research data collected outside laboratory notebooks that relate to research activity of the faculty of engineering are to be provided to the relevant department staff to be recorded in their laboratory notebook register, scanned and stored. Bound copies are then made available upon request.

9. **Laboratory Notebook Training**
   An introductory overview of the laboratory notebook policy and guidelines is to be provided by the supervisor for all new staff, students, and visitors.

10. **Laboratory notebook Audit and Review**
    Laboratory notebook audits and reviews are to be periodically conducted by the Resources/Operations Manager or their delegate, supervised by the Head of Department. Results from the audit will be provided annually to ADR for inclusion in a report to Faculty Executive.