Pharm.D - Year 5

Project Work

Complete subject manual: 8 practicals and activities. Each chapter includes a student observation or work record.

Use the PDF bookmarks to navigate. The table gives each practical's content-page count; the combined manual has continuous page numbers.

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Research Question and Topic Proposal

Experiment 1 - Practical Notes

Name: _____ Roll no.: _____ Date: _____

Aim

To complete the research question and topic proposal stage of a supervised pharmacy-practice project.

Principle

A useful project asks a focused pharmacy-practice question that can be answered within available time, access and ethical constraints.

Requirements

- Supervisor-approved project topic, institutional requirements and authorised project documents.
- Project record and analysis tools appropriate to the approved design.

Procedure

1. Define the problem

Choose a community, hospital or clinical pharmacy issue such as medicine utilisation, safety, adherence or resource use.

2. Specify the question

Name the population, setting, outcome and comparison where relevant.

3. Check feasibility

Discuss data availability, six-month project period, supervisor support and the approved group size.

4. Write the proposal

Draft the required two-page outline with title, objectives, method and anticipated benefits, with the institution-required academic citation format.

5. Obtain topic review

Record approval by the Head of Department/Institution through the local process before dependent work.

Observations and Record

Project record item	Entry
Topic / question	_____
Setting / outcome	_____
Feasibility	_____
Group and supervisor	_____
Topic-review status	_____

Result

Project stage: ____. Completed record: ____. Supervisor feedback: ____. Next action: ____.

Precautions

- This is a project-work guide and blank record, not a completed research study or an approval certificate.
- Use only authorised data and keep participant identifiers separate from the analysis dataset.
- Report actual findings, protocol departures and limitations; never fill missing data with invented observations.

Viva Questions and Answers

1. Why specify the question before collecting data?

The question determines design, measures and the intended analysis.

2. What makes the project reviewable?

An approved plan, traceable data, an appropriate analysis and an honest account of limitations.

Project Organisation

- The supplied syllabus specifies groups of two to four students under an authorised teacher.
- The topic is approved by the Head of Department or Institution and announced within one month of Year 5 commencement.
- Use beginning, middle and end seminars to review progress.

Background Review and Objectives

Experiment 2 - Practical Notes

Name: _____ Roll no.: _____ Date: _____

Aim

To complete the background review and objectives stage of a supervised pharmacy-practice project.

Principle

A background review identifies what is known, the uncertainty the project addresses and the measures needed to answer its question.

Requirements

- Supervisor-approved project topic, institutional requirements and authorised project documents.
- Project record and analysis tools appropriate to the approved design.

Procedure

1. Map the question

List the concepts, population and setting relevant to the project.

2. Search and record

Maintain a dated search log and a table of relevant original studies or authorised reports.

3. Appraise

Compare design, findings, limitations and relevance instead of copying conclusions.

4. Write objectives

Create a primary measurable objective and only the secondary objectives the approved data can support.

5. Connect to design

Explain how each objective will be measured and analysed.

Observations and Record

Project record item	Entry
Search log	_____
Evidence summary and limitations	_____
Knowledge gap	_____
Primary / secondary objectives	_____
Measurement plan	_____

Result

Project stage: ____. Completed record: ____. Supervisor feedback: ____. Next action: ____.

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Study Protocol and Analysis Plan

Experiment 3 - Practical Notes

Name: _____ Roll no.: _____ Date: _____

Aim

To complete the study protocol and analysis plan stage of a supervised pharmacy-practice project.

Principle

A protocol specifies who or what is studied, what is measured and how a valid answer will be obtained.

Requirements

- Supervisor-approved project topic, institutional requirements and authorised project documents.
- Project record and analysis tools appropriate to the approved design.

Procedure

1. Choose the design

Justify an observational, audit or other institution-approved design for the question.

2. Define eligibility

State setting, inclusion/exclusion rules, recruitment/record selection and the justified study-size approach.

3. Define variables

Create outcome, exposure and covariate definitions with units and timing.

4. Plan analysis

Specify descriptive measures, intended comparisons, missing-data handling and the need for statistical advice.

5. Plan conduct

List roles, timeline, access arrangements and change-control procedure.

Observations and Record

Project record item	Entry
Design and justification	_____
Eligibility / study-size rationale	_____
Variable definitions	_____
Analysis and missing-data plan	_____
Timeline / responsibilities	_____

Result

Project stage: ____. Completed record: ____. Supervisor feedback: ____. Next action: ____.

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Viva Questions and Answers

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Ethical Review Consent and Data Governance

Experiment 4 - Practical Notes

Name: _____ Roll no.: _____ Date: _____

Aim

To complete the ethical review consent and data governance stage of a supervised pharmacy-practice project.

Principle

Ethical review and data protection are part of project design. Record access does not itself authorise research use.

Requirements

- Supervisor-approved project topic, institutional requirements and authorised project documents.
- Project record and analysis tools appropriate to the approved design.

Procedure

1. Identify review needs

Use the institutional process for ethics approval and permissions required for the proposed project.

2. Prepare participant materials

Where applicable, develop clear information and consent documents for review, with voluntary participation and the authorised withdrawal process.

3. Plan privacy

Use coded records, separate the identifier key and define role-based access and retention.

4. Record decisions

Enter actual approval number/date and authorised conditions only when issued; leave pending fields blank.

5. Manage changes

Obtain required review before a protocol amendment or new use of data.

Observations and Record

Project record item	Entry
Review / permission status	_____
Consent process where applicable	_____
Coding and access plan	_____
Retention / disposal plan	_____
Amendment record	_____

Result

Project stage: ____. Completed record: ____. Supervisor feedback: ____. Next action: ____.

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Data-collection Tool and Pilot Review

Experiment 5 - Practical Notes

Name: _____ Roll no.: _____ Date: _____

Aim

To complete the data-collection tool and pilot review stage of a supervised pharmacy-practice project.

Principle

A consistent collection tool makes each variable interpretable and reduces avoidable errors. A pilot tests the tool within the approved permissions.

Requirements

- Supervisor-approved project topic, institutional requirements and authorised project documents.
- Project record and analysis tools appropriate to the approved design.

Procedure

1. Create the form

Align every field with an objective and define permitted entries and units.

2. Write a data dictionary

State variable name, definition, code values and missing/unknown codes.

3. Pilot as approved

Use a small authorised pilot or fictional record exercise to assess clarity; do not count fictional entries as study data.

4. Review problems

Identify ambiguous questions, missing fields and excessive collection.

5. Revise with review

Record tool version and approved changes before final collection.

Observations and Record

Project record item	Entry
Tool version	_____
Variable / coding dictionary	_____
Pilot type and permission	_____
Problems found	_____
Reviewed revision	_____

Result

Project stage: ____. Completed record: ____. Supervisor feedback: ____. Next action: ____.

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Data Cleaning and Descriptive Analysis

Experiment 6 - Practical Notes

Name: _____ Roll no.: _____ Date: _____

Aim

To complete the data cleaning and descriptive analysis stage of a supervised pharmacy-practice project.

Principle

Analysis begins with a traceable cleaned dataset. Descriptive summaries must match the data type and denominator.

Requirements

- Supervisor-approved project topic, institutional requirements and authorised project documents.
- Project record and analysis tools appropriate to the approved design.

Procedure

1. Preserve raw data

Keep a protected raw dataset and work on a labelled analysis copy.

2. Check completeness

Review duplicates, impossible values, inconsistent codes and missingness; document each correction.

3. Summarise

Use counts/percentages for categories and suitable centre/spread for quantitative data.

4. Show denominators

State how many records contributed to each result and why any were excluded.

5. Review

Compare outputs with the source records and the pre-specified analysis plan.

Observations and Record

Project record item	Entry
Dataset / version	_____
Cleaning decisions	_____
Included / missing counts	_____
Summary measure / denominator	_____
Review status	_____

Worked Example

The numbers below are illustrative; enter your own observations in the record.

- Percentage = number with the characteristic / relevant denominator × 100.
- Illustration: 18 of 60 fictional records gives 30%; if only 50 have an observed outcome, use and state the appropriate observed-outcome denominator.

Result

Project stage: ____. Completed record: ____. Supervisor feedback: ____. Next action: ____.

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Viva Questions and Answers

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Results Discussion and Conclusions

Experiment 7 - Practical Notes

Name: _____ Roll no.: _____ Date: _____

Aim

To complete the results discussion and conclusions stage of a supervised pharmacy-practice project.

Principle

Results state the observations; discussion interprets them with the design and limitations. A conclusion must not exceed what the data support.

Requirements

- Supervisor-approved project topic, institutional requirements and authorised project documents.
- Project record and analysis tools appropriate to the approved design.

Procedure

1. Present results

Use numbered tables/figures aligned with the objectives and label units, denominators and missingness.

2. Interpret

Compare observed findings with the project question and relevant evidence, distinguishing association from causation.

3. Discuss limitations

State selection, measurement, confounding, missing-data and generalisability limitations as applicable.

4. Conclude

Answer the approved objectives and separate supported conclusions from recommendations for future work.

5. Verify

Check that text, tables and calculations agree and all observations are traceable.

Observations and Record

Project record item	Entry
Objective-linked results	_____
Table / figure checks	_____
Interpretation	_____
Limitations	_____
Supported conclusion	_____

Result

Project stage: ____. Completed record: ____. Supervisor feedback: ____. Next action: ____.

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Viva Questions and Answers

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Project Report Seminars and Submission

Experiment 8 - Practical Notes

Name: _____ Roll no.: _____ Date: _____

Aim

To complete the project report seminars and submission stage of a supervised pharmacy-practice project.

Principle

The final report and seminars demonstrate the question, conduct, findings and the student's ability to explain and defend the work.

Requirements

- Supervisor-approved project topic, institutional requirements and authorised project documents.
- Project record and analysis tools appropriate to the approved design.

Procedure

1. Organise the report

Include objectives, methodology, results, discussion and conclusions, plus the institution-required front/back matter.

2. Check report format

The supplied syllabus specifies about 40–50 pages, A4, double spacing, Times Roman: title 18 pt bold, subtitles 14 pt bold and body 12 pt; cover student/teacher details 14 pt. Follow any authorised institutional update.

3. Prepare seminars

Prepare beginning, middle and end seminar material, showing actual progress and feedback.

4. Obtain certificates

Use only genuine certificates issued by the authorised teacher, Head of Department and Head of Institution; do not fill their signatures.

5. Submit

Use the institution-approved deadline; the supplied syllabus specifies submission at least one month before the examination.

Observations and Record

Project record item	Entry
Report version / page count	_____
Formatting and content checks	_____
Three seminar dates	_____
Certificate status	_____
Submission acknowledgement	_____

Result

Project stage: ____. Completed record: ____. Supervisor feedback: ____. Next action: ____.

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