

# Applied Research Methods (TNM 700/802) - 2021

## Introduction

The Applied Research Methods course is a compulsory attendance course for all postgraduate students in the Faculty of Health Sciences (Honours, Masters, including MMed students, as well as PhD students that have not yet done a formal research methods/protocol writing course).

## Exemption

If at any time you have already completed such a course or one similar you may ask for exemption by completing the form <http://www.ais.up.ac.za/health/blocks/tnm800/exemptionformtnm800.doc> and sending it to Dr Elize Webb at the School of Health Systems and Public Health ([elize.webb@up.ac.za](mailto:elize.webb@up.ac.za)). You need to provide the aspects that were covered elsewhere (like a study guide or programme) and proof of “passing” (and not only attending) the course. (e.g. a certificate or academic transcript).

## Major changes to the TNM700-TNM 700/802 course in 2021 and onwards:

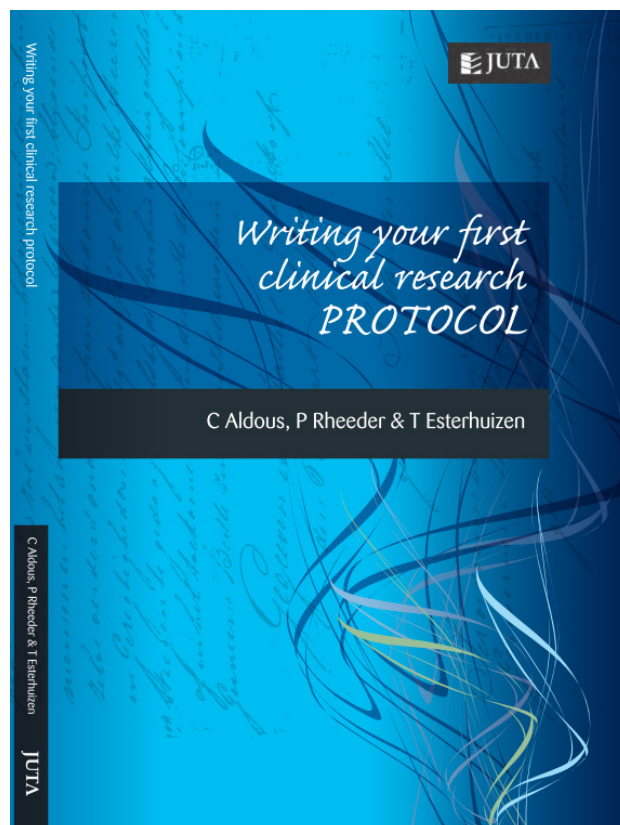
1. After registering for the TNM 700/802 course at student administration, you will need to book your place on the TNM 700/802 of your choice (various dates throughout the year) by going to ClickUP and navigating to the TNM 700/802 pre-course.
2. Prior to attending the course, you will be required to complete certain prerequisites and some pre-course work which has to be approved by your supervisor and submitted via ClickUP.
3. The roadmap regarding the above can be found on the course site on ClickUP.
4. One of the prerequisites includes a session at the Medical Library. You should do this in the months preceding the actual course you plan to attend. Book your place on the TNM 700/802 site in ClickUP.
5. So book your place on a TNM 700/802 course of your choice as well as the Library slot of your choice. Hurry as each course is restricted to between 10 and 30 students!
6. No bookings will be done for the course within departments or their convenors/secretariat, as in the past. **Only online bookings will be accepted!**

## The recommended textbook for TNM 700/802:

NOW AVAILABLE AT THE LOCAL  
**BOOKMARK BOOKSHOP!**  
(HW Snyman North; 4<sup>th</sup> floor next to  
Haloa Coffee Shop or  
at bookshops in Hatfield)

This workbook is specifically aimed at post graduate students in the health care sciences doing the TNM 700/802 course and who are putting together their first research protocol. This workbook follows the UP Faculty of Health Sciences template and guides the student step by step from start to finish.

It includes a chapter on statistical planning and data analysis. UKZN (C. Aldous and T. Esterhuizen) and UP (P. Rheeder) worked together to produce what we hope will be a useful tool for students to complete their protocols and thus also research projects successfully.



### 1. Course objectives

This attendance course aims to equip students with the necessary knowledge and skills to write a scientifically valid and feasible research protocol that will optimize the student's chance of successful completion of the research project and that will meet all the requirements of the specific academic and ethics committees of the Faculty of Health Sciences.

**PLEASE NOTE:**

The course provides you with the resources you need to produce an excellent research protocol.

The protocol is your responsibility and assumes **critical input** from your academic supervisor (see registration form). The important relationship is between the Student researcher and the Academic supervisor, where the TNM presenter is the research process facilitator.

Satisfactory attendance of this course does not imply endorsement of your protocol. Input in your protocol will be given by the course presenter, but the final approval of the protocol, going to the relevant academic and then ethics committees, lies with the academic supervisor (and co-supervisor, if applicable).

**PLEASE NOTE:**

There are broadly 3 groups of students and focus areas of the TNM course as well.

- 1) Clinical (**CL**) and Public Health (**PH**) orientated students
- 2) Laboratory based disciplines/medical anthropology (**L**)
- 3) Those doing Qualitative Research (e.g. focus groups, in depth interviews) (**Q**)

## 2. Course options, contact details and registration

### 2.1 TNM 700/802 offerings in 2021 (*Register three months in advance*)

| Offered by:                                | Course focus | Presenter  | Dates  | Time in class/online                   | Max # students   |
|--|--------------|--|--|--|------------------|
| School of Health Systems and Public Health |              | Dr C Blunden/<br>N Claassen<br><i>(BSc Honours only)</i> | 18-22Jan   | 8-13h                                  | 20               |
| Department of Pharmacology                 | CL PH<br>L   | Prof V Steenkamp   | 2 Feb - 18 Mar                                       | Tuesday and Thursday afternoons 13-15h | No limit [40-50] |
| Department Psychiatry                      | CL Q         | Prof C Kruger  | 4,11,18,25 Feb<br>4,11,18,25 Mar<br>1,8,15,22,29 Apr | Thursdays 13-16h                       | 10               |
| School of Health Systems and Public Health | CL PH        | Prof T De Jager  | 15-19 Feb  | 8-13h                                  | 20               |
| Department of Internal Medicine            | CL PH        | Prof DG Van Zyl  | 22-26 Feb  | 8-13h                                  | 15               |
| Department of Anatomy                      | L            | Ms Leandi Liebenberg                                     | 22 Feb - 05 Mar                                      | Wed 13h30-15h30                        | 20               |
| Department Paediatrics                     | CL PH        | Prof R Green   | 1-5 March  | 14-16h                                 | 15               |
| Dept of Medical Microbiology               | L CL         | Prof Marthie Ehlers                                      | 1-5 March  | 8-13h                                  | 20               |
| Section Sports Medicine                    | CL PH        | Dr R Grant   | 15-19 Mar  | 8-13h                                  | 15               |
| Department of                              | L            | Prof A Phulukdaree                                       | 12, 13, 14, 19, 20,                                  | (8:30 -                                | 30               |

|  |            |   |                          |                |    |
|--|------------|---|--------------------------|----------------|----|
| Physiology                                 |            |   | 21 Apr                   | 11:30am daily) |    |
| School of Health Care Sciences             | Q PH<br>CL | Prof C Maree  | 19-23 Apr                | 08:00-13:00    | 20 |
| Dept of Internal Medicine                  | CL PH      | Prof P Rheeder                                      | 17-21 May                | 8-13h          | 15 |
| Department of Surgery                      | CL         | Prof T Mulaudzi, Dr B Jackson                       | 31 May – 3 Jun           | 8-13h          | 10 |
| Department of Internal Medicine            | CL PH      | Prof DG Van Zyl                                     | 19-23 Jul                | 8-13h          | 15 |
| Dept of Nuclear Medicine                   | CL         | Prof M Sathekge<br>Prof M Vorster<br>Prof P Rheeder | 26-30 Jul                | 8-13h          | 20 |
| SHSPH ( <i>replacement 21 July 2021</i> )  | CL,<br>PH  | Dr EM Webb  |                          |                |    |
| School of Health Systems and Public Health | CL PH      | Prof J Wichman<br><b>(SHSPH students only)</b>      | 26-30 Jul                | 8-13h          | 20 |
| Department of Physiology                   | L CL       | Prof J Mercier                                      | 30 Aug - 3 Sep & 17 Sept | 8:30-13:00     | 10 |
| School of Health Systems and Public Health | CL PH      | Dr B Harris   | 27 Sep - 1 Oct           | 8-13h          | 20 |
| School of Health Care Sciences             | Q PH<br>CL | Prof C Maree  | 4-8 Oct                  | 08:00-13:00    | 20 |
| School of Health Systems and Public Health | CL PH      | Dr EM Webb  | 18-22 October            | 8-13h          | 20 |

**Note: Course focus :**

**CL** = Clinical; **PH** = Public Health; **L** = Laboratory; **Q** = Qualitative methods

## 2.2 Course curriculum and content

All the TNM 700/802 courses have the same objective:  
**Creating a scientifically sound great protocol!**

- a. Motivation for research
- b. Picking a research problem and setting priorities, applicability
- c. The background to the problem: The literature review
- d. Phrasing the question: title, aims and objectives, hypotheses
- e. Methods

- a. Study designs including Qualitative research
- b. Bias and confounding
- c. Causality
- d. Measurement and definitions
- e. Questionnaires
- f. Sampling and sampling methods
- g. Pilot study

- f. Data Analysis

- a. Sample size and power
- b. Types of data
- c. Distribution of data
- d. Comparing groups
- e. P values and confidence intervals
- f. Statistical vs clinical significance
- g. Statistical consultation

- g. Budget and Funding

- h. Ethics

- a. Basic Bioethics
- b. Guidelines (Helsinki etc)
- c. Vulnerable groups. Children etc
- d. Informed consent and Confidentiality
- e. Animal rights (if applicable)
- f. Fraud
- g. The Academic & Protocol committees and how to process your protocol

- i. Authorship

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