

Guidelines for Integrating project [ACHA-4008]

The Integrating project should contain the following sections

a) **Cover/title page:**

This must state the

- Title of the project
- Name and student number,
- Programme for which it is submitted,
- The statement:
‘This project is submitted in partial fulfilment of the requirements for the Certificate of Higher Education : _____ [insert full title of the programme for which you are registered] , University of Wales Trinity Saint David’
- Date of submission.
- **IMPORTANT NOTE: No colours! No fancy designs! No underlining etc! No images other than the University logo!**
- A copy of the form can be found in Appendices 1

b) **Declaration:**

By submitting a Project Report for marking, a student is giving permission for a copy of their report to be held for reference, at the University's discretion. They are also agreeing to the following:

‘I have read and understood the University Regulations concerning plagiarism and I undertake:

- That all material presented for examination is my own work and has not been written for me, in whole or in part by any other person(s).
- That any quotation or paraphrase from the published or unpublished work of another person has been duly acknowledged in the project

c) **Table of contents:**

This must list the contents of the report by chapters, with sections where appropriate, and the page number for each, together with the page numbers for the notes, bibliography and any maps, figures, and tables.

d) **Abstract:**

This must provide a brief statement (minimum of 200 words) of the main themes or findings of the Project work.

e) **Acknowledgements:**

Students may wish to acknowledge any help that they received in the preparation of their Project work.

f) **Main text:**

Each main heading (chapters, references, bibliography) must start on a new page. Sections within chapters may continue the same page.

Following is a guideline to prepare the main text of the report:

•**Chapter One: The Problem /Introduction**

This chapter should start off by setting the context for the work:

- What is the project about?
- What are the initial aims and objectives for the project?
 - Aim (problem statement)- what is the overall research question you're trying to answer?
 - Objectives - what are the actions you're going to take to try to satisfy the aim?
- A **brief** description of what is coming up in the following chapters (this should be the final paragraph of the introduction).
 - Project plan/Gantt Chart

•**Chapter Two: Review of Related Literature**

This should include a comprehensive element of review and scholarly research. Show how your project fits into the framework of that discipline by reviewing books and papers describing the problem you are trying to solve and potential solutions to the problem.

- What other research has been done in your field?
- Who did this research?
- What were their results?
- How do these results relate to other researchers' work in the field?
- Split the literature review into sections, each looking at a different part of the research problem
- Write an introductory paragraph at the start of the chapter that **briefly** describes the sections
- Write a concluding paragraph at the end of the chapter that **briefly** sums up the most important points.

The most important attribute that your review should possess is relevance.

Chapter three

•**Chapter Three: Design & Implementation**

INTEGRATING PROJECT(ACHA4008) REPORT WRITING GUIDELINE

This is a major section which describes your deliverable. Here you explain in detail the what, why and how of the procedures you used in order to generate the solution to the idea.

It may be a software artifact, a new framework, a systems design, etc. This may span more than one chapter and will have title(s) which reflect its content.

The rule is to describe your method in sufficient detail to allow the reader to replicate your study. What research methodology/methodologies did you use - experimental (hypothesis testing), investigative, action, survey, case-study etc? Do not include a review of all possible methods that could be used – the reader is interested in what method you chose and why.

•Chapter Four: Presentation and Analysis of Results (with screen dumps)

Development-based Projects

- What are the project requirements? How did you discover them?
- Explain any system models that you have created (e.g. Use Case, BPMD or E-R diagrams) to describe the system (use case documents accompanying a use case diagram can go in the appendices)
- Describe any interfaces you have created (e.g. using prototypes and storyboards)
- Describe problems or successes you had
- Include code snippets where appropriate, but do **not** include pages of code
- Describe the testing of the software:
 - Unit testing (do the individual bits of code work?)
 - System testing (does the system as a whole work?)
 - Usability testing (does the interface work?)
 - Acceptance testing (does the user believe that it does what it's supposed to do?)

Experiment-based projects

- For each experiment performed
 - What were the results?
 - If appropriate, show the results diagrammatically
 - If appropriate, show the results of any statistical analysis
 - Were they what you expected?
 - If they are not what you expected, is there any reason for this?
 - How does this link back to your literature review?
- Are there any interesting correlations in your data? If so, are they expected?
- Overall, are the answers what you would expect? If not then why not?

- If you have done multiple experiments, do they support each other or differ from each other? Do the experiments show what the literature review suggested would happen?

•Chapter Five: Conclusions and Recommendations

- This section should summarize everything you have done
- Does your project suggest any further work for research?

In your summing-up, you need to show how your work contributed to meeting the objectives you set in the introduction. In doing so, it is appropriate to repeat (in summary form) key points from your review, design, implementation and evaluation as necessary.

Any further work that can, or should, be undertaken to expand upon your work is to be highlighted. The benefits gained from your work should be identified (these are **not** to include personal benefits). Also, any recommendations should be included here.

g) **References:**

A list of references (work directly quoted or paraphrased in your text) and its source. For more information on this, see Appendices 4 and 5.

h) **Bibliography:**

A list of background reading undertaken, but not necessarily directly quoted in the text.

APPENDICES

Appendices to a report contain information that, while not important or interesting enough to be included in the body of the report, is nevertheless relevant. Common examples include program source code, program documentation, intermediate documents. Your report stands alone without these, but the reader may occasionally wish to refer to them.

The key word here is “occasionally”. If it is crucial to read something in order to understand some point being made in the report, then that “something” should be replicated in the body of the report.

- All data used in the development of the project.
- Annotated code for any programs developed.
- Examples of questionnaires
- A summary of questionnaire results.
- Test data used to evaluate the product.
- Tables too detailed for the main text
- Technical notes
- Copies of documents not generally available but referred to in the report

GENERAL POINTS ABOUT REPORT

a. Spelling and Grammar

You should take care to present your work in an attractive, legible format.

Spelling and grammar should always be checked as part of the proof reading process. A poor standard of spelling will create a poor impression to the reader and will invariably be marked down as will poor sentence construction and punctuation. Be careful when using the spell checker on the word processing package that it is set to UK English.

Distribute your text between the margins. Justified gives your document clean, crisp edges so it looks more polished.

b. Word Limit

The Project documentation has a maximum word limit of around 2000 words. Other relevant material, eg code listings, may be included in appendices and are not subject to the word limit.

c. Style Requirements

You should make sure that the final submitted version of your work conform with the following specifications. If in any doubt, consult your supervisor or the Project Co-ordinator.

- White, A4 size in portrait format to be used. Seek guidance for any larger illustrative material.
- Black word-processed type to be used. The font chosen for the main body of the finished work should be easy to read. eg Times New Roman, Arial, Calibri.
- Text should be double-spaced (or 1.5 spaced)
- Pages should be numbered consecutively throughout the main text (including appendices) Numbering should be bottom centre of each page.
- Each chapter should begin on a separate page.
- Illustrative material should be arranged near the appropriate text.
- Tables or figures should be given a number, a title and a source if not derived from original research work. As with other illustrative material, they should be placed as close as possible to any text reference and referred to by their number in the text.

d. Plagiarism

Plagiarism is defined as the unacknowledged use of another's work as if it were one's own. To illustrate, if you when you are evaluating the state of the art of a subject area you come across a really good section in a textbook or research journal that made a salient point and you copied it without acknowledgement, that would be plagiarism. So using the words of another author, or even using figures from elsewhere, without saying where they came from is a serious academic

offence. What you are doing really amounts to theft of another person's intellectual property and deception in trying to pass it off as your own work. This is regarded as very serious.

The following are clear examples of plagiarism:

- Using directly quoted material without placing it within quotation marks (or indenting and single spacing the quote);
- Paraphrasing the work of an author and attempting to pass it off as your own by not including a citation;
- Submitting the work of someone else as if it is your own.
- Incorporating a piece of program code within your solution without reference to the source.
- Inability to defend written work in a viva situation.

You can, of course **use** the ideas, program code and data of others - there is no problem if you acknowledge the source. That is why the referencing system is so important. See Appendices 4 and 5 for more detail on this.

Plagiarism is a serious matter and will not be tolerated. Disciplinary action will be taken against transgressors.

e. Handing in your Project Report

- ***All projects must be submitted to Turnitin via the link on Moodle.*** Submission is electronic-only. No printed copies are required.
- Remind: Your report should include a page with the Declarations and consent form. This should be included just after the title page. A copy of the forms can be found in Appendices 2 and 3.

APPENDIX 1: TITLE PAGE

 Prifysgol Cymru Y Drindod Dewi Sant University of Wales Trinity Saint David
A Study of the use of Wireless Underwater Sensor Networks in Swansea Bay
by Joe Bloggs
Supervisor: Dr Kapilan Radhakrishnan
Project submitted as part of the requirements for the award of BSc (Hons) Computing (Computer Networks and Cybersecurity)
April 2023

APPENDIX 2: DECLARATION FORM

DECLARATION

I have read and understood the University Regulations concerning plagiarism and I undertake:

- That all material presented for examination is my own work and has not been written for me, in whole or in part by any other person(s).
- That any quotation or paraphrase from the published or unpublished work of another person has been duly acknowledged in the project

APPENDIX 3 :CONSENT FORM

FORM OF CONSENT

I(FULL NAME HERE)..... hereby consent that my Project, submitted in candidature for the Certificate of Higher Education: (xxxxxxxxxxxxx) degree, if successful, may be made available for inter-library loan or photocopying (subject to the law of copyright), and that the title and abstract may be made available to outside organizations.

(replace (xxxxxxxxxxxxx) with the name of your degree)

APPENDIX 4: ELECTRONIC DATABASES AND JOURNALS

Library web pages available at <https://uwtsd.ac.uk/library/>

(Links from here to: **General library information; Library catalogue; Subject Guides plus Electronic Journals and Databases**)

APPENDIX 5: REFERENCING CONVENTIONS

When you refer to a piece of work in an essay, report, program or academic paper, you must give adequate bibliographic information to allow the reader to trace the original document. (For note on Plagiarism See Section 8.2.5). So, if you wish to incorporate points made by another author or figures derived from a survey or report, acknowledge the sources used in the text of your project and give full details of the source in the reference list at the end of your work.

A reference is usually in two parts:

1. a marker at the end of the text being quoted or referred to, and
2. a complete citation in either a footnote or, more usually in computer science, collected with other citations in a "References" section at the end of your work.

Note sometimes you will find references at the foot of the page rather than at the end of the work but it is simpler to provide an alphabetical list at the end of the project.

The Numeric System

Citations use a sequential number scheme, with the citation number enclosed in square brackets corresponding to the appropriate reference provided at the end of the document.

INTEGRATING PROJECT(ACHA4008) REPORT WRITING GUIDELINE

Example :

In your work :

..... as Smith [14] has shown
..... blue has been shown [14] to be the best

In the Bibliography at the end :

[14] A. Smith, *A Book Title*, 2nd ed., Wiley, 2002

The numbering should be sequential as citations are used, the first reference used in the document should begin with one, the second is two, etc. If the same reference is used in the document then you may repeat the previously assigned reference number e.g.

In your work :

..... from Smith [1] we find that
..... Jones et al [2] also states
..... it has been shown [1] that
..... which matches similar findings [3]
.... other research [1][2][3] has proven

In the Bibliography at the end :

[1] A. Smith, *A Book Title*, 2nd ed., Wiley, 2002

[2] D. Jones, B. Thomas, *Another Book Title*, O'Reilly, 2004

[3] K. Smith, *Yet Another Book Title*, Chichester: Wiley, 2006

When using a reference you don't explicitly need to specify the author(s) name, but specifying the author's name can increase readability. Also, if many authors contributed to the book, paper, etc, then identify the first author and use "et al" to indicate that there were many contributors.

In your work :

..... it has been shown [2] that
..... Jones et al [2] also states

Quotations should be placed in quotes, italicized and tabbed from the edge, with a clear reference to the source. In addition, for clarity it is recommended that a single blank line be added before and after the quotation

For example:

"It becomes clear that, in most cases, the goal of finding out about people through interviewing is best achieved when the relationship of interviewer and interviewee is non-hierarchical and when the interviewer is prepared to invest his/her own personal identity in the relationship" Bloggs et al [6]

The author's name (Bloggs et al) in the above is optional but is included for readability.

When should a citation be used?

1. All direct quotes must be cited.
2. Even when you have translated an author's words into your own (which you should make every effort to do), you must still give them credit by including a citation. When an entire paragraph of material is based on one author's ideas, you only need place one citation at the end of the paragraph. Exceptions to this rule follow in (3) and (4).
3. All statistics that are cited require a citation immediately following the sentence in which they appear.
4. All historical events and dates mentioned require a citation.
5. References should be included for all websites used.

Reference Information and Structure

All references should be added to a "References" section included towards the end of the document.

The details which need to be included in references (author, title, etc) depend on the type of publication you are citing (articles, books, etc). For the commonest types of publication, the examples below show the information you should give, as well as the correct use of italics and punctuation.

There are a number of referencing systems but **the Numeric system** is the system that MUST BE USED for the Project. For a full explanation and examples of the numeric systems see Appendix 6.

APPENDIX 6: NUMERIC REFERENCING SYSTEM

Numeric Referencing Guidelines

The details which need to be included in references (author, title, etc) depend on the type of publication you are citing (articles, books, etc). For the commonest types of publication, the examples below show the information you should give, as well as the correct use of italics and punctuation.

Book

Author(s) or editor(s) of book | Title of book: and sub-title if there is one (in italics) | Edition (if not the first) | Place of publication | Publisher | Year of publication

Author(s) and Title should be given as they appear on the title page inside the book. (The front cover may have less detail.) Information such as the year, place of publication and publisher is usually on the back of the title page.

Edition should be abbreviated: 2nd ed.

Place of publication is usually a town or city. For U.S. place names, give the two-letter state abbreviation as well.

Examples

[1] W.-K. Chen, *Linear Networks and Systems*. Belmont, CA: Wadsworth, 1993.

[2] S. Lin and D. J. Costello, Jr., *Error Control Coding: Fundamentals and Applications*. Englewood Cliffs, NJ: Prentice Hall, 1983.

[3] G. C. Clark, Jr. and J. B. Cain, *Error-Correction Coding for Digital Communications*. New York: Plenum Press, 1981.

[4] R. Steele and L. Hanzo, Eds., *Mobile Radio Communications*, 2nd ed. Chichester: Wiley, 1999.

[5] M. A. Soderstrand, W. K. Jenkins, G. A. Julien, and F. J. Taylor, Eds., *Modern Applications of Residue Number System Arithmetic to Digital Signal Processing*. New York: IEEE Press, 1986.

Chapter in a Book

Author(s) of chapter | "Title of chapter" (in quotes) | in *Title of book (in italics)* | Edition (if not the first) | Editor(s) of book | Place of publication | Publisher | Year of publication | Pages covered by chapter

Examples

[6] G. O. Young, "Synthetic structure of industrial plastics," in *Plastics*, 2nd ed., vol. 3, J. Peters, Ed. New York: McGraw-Hill, 1964, pp. 15-64.

[7] S. Godsill, P. Rayner, and O. Cappé, "Digital audio restoration," in *Applications of Digital Signal Processing to Audio and Acoustics*, M. Kahrs and K. Brandenburg, Eds. Boston, MA: Kluwer Academic, 1988, pp. 133-194.

- [8] J. K. Hao and R. Dorne, "Study of genetic search for the frequency assignment problem," in *Artificial Evolution: European conference, AE 95, Brest, France, September 4-6, 1995 : selected papers*," J.-M. Alliot, Ed. Lecture Notes in Computer Science, 1063. Berlin: Springer-Verlag, 1996, pp. 333-344.

Journal Article

Author(s) of article | "Title of article" (in quotes) | *Title of Journal (in italics)* | Volume number (and issue number if there is one) | Pages covered by article | Date of Publication

Date of Publication should include the month or season if it appears on the journal: e.g. Feb. 1987; Winter 2000; Mar.-Apr. 1963

Examples

- [9] G. Strang, "Wavelets," *American Scientist*, vol. 82, pp. 250-255, 1994.
- [10] I. S. Qamber, "Flow graph development method," *Microelectronics Reliability*, vol. 33, no. 9, pp. 1387-1395, Dec. 1993.
- [11] F. Bonomi and K. Fendick, "The rate-based flow control framework for the ABR ATM service," *IEEE Network*, vol. 9, pp. 25-39, 1995.
- [12] E. H. Miller, "A note on reflector arrays," *IEEE Transactions on Antennas and Propagation*., to be published.

Article from Conference Proceedings (published)

Author(s) of article | "Title of paper" (in quotes) | in *Title of proceedings (in italics)* | Location and date of conference | Pages covered by article

Examples

- [13] R. Bauer and J. Hagenauer, "Iterative source/channel-decoding using reversible variable length codes," in *Proceedings of the IEEE Data Compression Conference (DCC)*, Snowbird, UT, Mar. 2000, pp. 93-102.
- [14] A. K. Salkintzis, C. Chamzas, and C. Koukourlis, "An energy saving protocol for mobile data networks," in *International Conference on Advances in Communication and Control (COMCON 5)*, June 26-30, 1995, pp. 107-113.

Paper Presented at a Conference (unpublished)

Author(s) of paper | "Title of paper" in quotes | presented at Title of conference | Location and date of conference

Unpublished papers are often made available as reprints to conference delegates but do not appear in collected conference proceedings, so no pagination should be given.

Examples

- [15] F. Comellas and J. Ozón, "An ant algorithm for the graph coloring problem," presented at ANTS '98 – From Ant Colonies to Artificial Ants: First International Workshop on Ant Colony Optimization, Brussels, Belgium, Oct. 1998.

- [16] L. Gao, J. Kurose, and D. Towsley, "Efficient schemes for broadcasting popular videos," presented at the 8th International Workshop on Network and Operating Systems Support for Digital Audio and Video (NOSSDAV '98), Cambridge, UK, July 1998.

Thesis or Dissertation

Author of thesis | "Title of thesis" (in quotes) | Qualification and type of report | University/Institution | Year of award

Qualification should be abbreviated as Ph.D., M.Phil., etc. The type of report (e.g. thesis, dissertation, etc) should be given as it appears on the document as the terminology may vary between countries. It is helpful to add the country unless the university is particularly well-known.

Examples

- [17] E. F. Mastrovito, "VLSI architectures for computation in Galois Field," Ph.D. dissertation, Linköping University, Sweden, 1991.
- [18] A. Chini, "Multi carrier modulation in frequency selective fading channels," Ph.D. dissertation, Carleton University, Canada, 1994.
- [19] Y. W. Kim, "Study and implementation of system synchronization for DAB (Digital Audio Broadcasting)," Masters thesis, Korea Advanced Institute of Science and Technology, Korea, 1996.
- [20] J. G. O. Moss, "Spread spectrum technologies for future communication systems," D.Phil. thesis, University of Oxford, 1998.

Technical Report

Author(s) of report | "Title of report" in quotes | Series title and number (if applicable) | Place and date of publication

Technical reports are often not formally published and may not have clear publication details. Give as much information as you can so your readers can obtain the report if they wish.

If the place of publication is obvious from the series title there's no need to repeat it at the end.

Examples

- [21] M. Krunz and S. K. Tripathi, "Scene-based characteristics of VBR MPEG-coded video traffic," University of Maryland, CS-TR-3573, 1997.
- [22] J. H. Stott, "Phase noise in OFDM: Further insights, including the use of weighting functions," BBC, R&D Department, Technical Note no. R&D 0166(94), Dec. 1994.
- [23] A. Dan, P. Shahabuddin, D. Sitaram, and D. Towsley, "Channel allocation under batching and VCR control in movie-on-demand servers," IBM Research Report, 1994.
- [24] International Telecommunications Union, "Terrestrial digital multimedia/television broadcasting system development in China," ITU-T Document 6E/50-E, Geneva, Mar. 26, 2001.

Standard

Name of the organization which produced the standard | "Title of standard" (in quotes) | Catalogue code or number of standard | Date of publication

Standards are frequently issued in draft and revised versions. Make sure you cite all the catalogue/numbering and date information exactly as it appears on the document.

If the name of the organization appears in the catalogue code or number of the standard it can be abbreviated.

Examples

- [25] International Standards Organisation, "Information technology – Generic coding of moving pictures and associated audio information: Video specification," ISO/IEC 13818-2, Nov. 1994.
- [26] Federal Communications Commission, "Code of Federal Regulations," Title 47, Ch. 1, Part 73, Radio Broadcast Services. Secs. 73.683, 73.684 and 73.699.
- [27] European Telecommunications Standards Institute, "Digital Audio Broadcasting (DAB) to mobile, portable and fixed receivers," ETSI EN 300 401 v1.3.3, May 2001.
- [28] Institution of Electrical and Electronic Engineers, "Wireless Medium Access Control (MAC) and Physical Layer (PHY) Specifications," IEEE Draft standard 802.11 D3.1, Apr. 1996.

Patent

Author(s) of the patent | "Title of patent" (in quotes) | Issuing country/organisation and number of the patent | Date of filing

Examples

- [29] L. Idoumghar, "Using a hybrid genetic algorithm to solve the frequency assignment problem," Patent TDF, N. 01 06 885, May 2001.
- [30] Z. Yang, "Terrestrial digital multimedia/television broadcasting system," P.R.China Patent 00 123 597.4 filed Aug. 25, 2000, issued Mar. 21, 2001.
- [31] S. Kawa, K. Kiyoshi, and S. Takeshi, "Route bus service controlling system," U.S. Patent 4 799 162, Jan. 1989.

Unpublished Source

Author(s) | "Title of document" (in quotes) | Type of document | Date (if applicable)

The type of document might be an unpublished manuscript, e-mail or private correspondence, etc. Clearly these are not available to your readers but you should still give as much detail as you can.

Examples

- [32] B. Chen and C.-E. W. Sundberg, "Adaptive multicarrier modulation for IBOC-AM," Unpublished work.
- [33] R. Cupo and M. Shariat, "All-digital AM system architecture," Private communication, May, 1998.

Online Source

Author(s) | "Title of source" | Organization/Publisher/Date | [Online] | Available: access information | [Accessed: Date of access]

An online source may not always contain clear author or publisher details. When you cite an online source try to describe it in the same way you would describe a similar printed publication. If possible, give sufficient information for your readers to retrieve the source themselves.

The access information will usually be just the URL of the source. If the item is only available by e-mail, ftp or some other method, include a brief mention of how to obtain it.

As well as a publication/revision date (if there is one), the date of access is included since an online source may change between the time you cite it and the time it is accessed by a reader.

Examples

- [34] T. Rahkonen, "Analysis of analog circuits using Volterra series," University of Oulu, Oulu, Finland, 1999. [Online]. Available:
http://www.ee.oulu.fi/~timor/DCourse/Chp1_2.pdf. [Accessed: Sept. 14, 2002]
- [35] S. McCanne and S. Floyd, "The UCB/LBNL network simulator," 1997. [Online]. Available:
<http://www.mash.cs.berkeley.edu/ns/>. [Accessed: Jan. 23, 1999]
- [36] Advanced Television Technology Center, Inc., "ATTC introduces RF data capture project," Press release, Mar. 2000. [Online]. Available: <http://www.attc.org/RFCapture.PDF>. [Accessed: Mar. 15, 2001]
- [37] "AlphaCom Communications introduces VMSK technology," *The Business Journal Online*, May, 2000. [Online]. Available: <http://www.business-journal.com/LateMay00/Alpha.html>. [Accessed: May 2, 2000]
- [38] "A 'layman's' explanation of Ultra Narrow Band technology," Oct. 3, 2003. [Online]. Available:
<http://www.vmsk.org/Layman.pdf>. [Accessed: Dec. 3, 2003]
- [39] European Telecommunications Standards Institute, "Digital Video Broadcasting (DVB); Implementation guidelines for DVB terrestrial services; transmission aspects," ETSI TR-101-190, 1997. [Online]. Available: <http://www.etsi.org>. [Accessed: Aug. 17, 1998]
- [40] S. J. Salamon, "DTV receiver performance studies," presented at the 49th Annual Broadcasting Symposium, IEEE Broadcasting Technology Society, Sept. 24, 1999. [Online]. Available:
http://www.attc.org/BTS_Rx.PDF. [Accessed: Jan. 18, 2000]
- [41] P. Karn, "General-purpose Reed-Solomon encoder/decoder in C," Jan, 2002. [Online]. Available:
<http://www.ka9q.net/code/fec/>. [Accessed: Oct. 8, 2002]
- [42] A. Harriman, "Compendium of genealogical software," *Humanist*, Jun., 1993. [Online]. Available e-mail: HUMANIST@NYVM Message: get GENEALOGY REPORT. [Accessed: Jun. 8, 2003]