

Curriculum to teach
Information Ethics at universities
in Africa

Beverley Malan and Coetzee Bester

**Curriculum to teach Information Ethics
at universities in Africa
2014**

ISBN: 978-1-920527-84-6

Editors

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Cover Design

Benson Lechaba

Published By

African Centre of Excellence for Information Ethics

Department of Information Science

University of Pretoria

South Africa

Printed By

Groep 7 Drukkers & Uitgewers BK (1993/24129/23)

Posbus 14717, Sinoville, 0129

Tambotieweg 776, Kameeldrif-oos, Pretoria

www.groep7.co.za

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FOREWORD

In its draft resolution for Programme V, aimed at sustaining peace and development through freedom of expression and access to knowledge (*Document 37 C/5 – Volume 1* –on pages 31 to 33), UNESCO identifies 13 *focus areas* and two “*main lines of action*’ to guide its activities and reports for the period 2014 to 2017. Strategic Objective 9 of the UNESCO programme focuses on rules, guidelines and norms regarding the inalienable right of humans to have ***access to information and knowledge***. More specifically, the resolution deals with the ***regulation, accountability and ethical standards*** that should be applicable to the free flow of information (Section [i]), the creation of an ***enabling environment*** (Section [iii]), ***gender equality*** (Section [v]), ***good practice and institutional excellence*** (Section [vii]), ***ability*** (Section [ix]), ***universal access*** to cyberspace and information and knowledge (Sections [x & xi]), and the need for debate on the ***ethical dimensions*** of information and knowledge societies (Section [xiii]).

It is the emphasis placed on the last of these, namely the ***ethical dimension of information use and dissemination***, that led, first to discussions on the need to sensitize users of information communication technology to the risks and opportunities inherent in the use of information communications technology, and then to the education of developing information societies on the responsible use of information technology as a communication and governance tool. The curriculum framework presented in this document is the result of these discussions. It could, however, also be seen as a response to the UNESCO recommendations on ways in which communities could be empowered to become ethically competent knowledge and information societies. The most critical of these recommendations are (a) the development of curricula for training in Media and Information Literacy (MIL) (Section [vi]), and (b) the imperative for the ***private sector and academic institutions*** to assist National Committees and governments - ***particularly in Africa*** - to stimulate and promote debates on the ***ethical responsibilities*** of information and knowledge societies (Section [xiii]).

It is our contention that the development of e-competence and a commitment to the ethical use of information communications technology in Africa is dependent on the existence of *ethical guidelines*, the

empowerment of society in the field of information technologies and the use of *intermediaries* as change agents. It follows that:

- i) **Ethical guidelines** for safe existence, participation and survival in the information and knowledge society have to be researched, described and implemented through awareness campaigns, teaching and instruction.
- ii) **Empowerment** towards information and knowledge societies requires the development and implementation of policies as well as investments in information communications technology infrastructure, equipment and training. Training could be formal or informal, including awareness workshops as well as the roll-out of short courses and/or academic programmes for university students and information technology practitioners.
- iii) The involvement of a range of **intermediaries** - academic institutions, private sector platforms, government structures and social media - who could assist governments in Africa to formulate and implement intervention strategies that will facilitate access to and the safe use of information and knowledge.

It was to address both the UNESCO objectives and uniquely African needs in the field of information ethics that a group of academics from across the globe established the African Network of Information Ethics (ANIE)¹. Informing the establishment of ANIE – in 2007 - was the lack of African representation, African academics in particular, on information ethics web-sites and at international conferences. ANIE's mission was to turn this situation around by ensuring that African academics became part of the global discourse on information ethics. According to ANIE this could best be done if African academic began researching, publishing and educating others information ethics issues.

Based on its vision, ANIE organized a number of international research workshops and conferences on Information Ethics in Africa, established a website dedicated to this topic, developed an introductory workbook on information ethics, compiled a number of readers containing selected conference papers on Information Ethics in Africa, and initiated the development of an Information Ethics curriculum for Africa.

1 See Appendix A for more detail on the origin, mission and history of ANIE and the ACEIE

ANIE also arranged meetings with a wide range of persons who had sufficient influence to act as advocates for its mission. These meetings eventually resulted in the forming of partnerships with the Department of Communication in South Africa, with UNESCO, and with a number of universities – in South Africa, Africa and internationally. In 2012 the South African Department of Communications entered into a formal agreement (Appendix K) with the University of Pretoria to establish an information ethics centre known as the African Centre of Excellence for Information Ethics (ACEIE). Based at the University of Pretoria, the centre serves a dual purpose.

- ❖ *Firstly*, it conducts and facilitates research on information ethics issues globally and locally.
- ❖ *Secondly*, it coordinates activities which are aimed at enhancing the awareness and knowledge of all those with a stake in and/or a role to play in the promotion of information ethics.

Directed by this dual purpose, the ACEIE set itself two objectives, namely:

- i) to conduct stakeholder workshops on information ethics, not only in South Africa but also in other African countries, and
- ii) to develop a curriculum on Information Ethics for Africa that would be piloted and eventually implemented at selected higher education institutions across Africa.

To date the centre has convened **five** conferences and facilitated numerous workshops on information ethics across Africa. It has, moreover, contracted a curriculum consultant briefed to develop a curriculum framework on Information Ethics for Africa. Using conference and workshop recommendations, as well as existing research and courses on information ethics as basis, the consultant ensured that each draft of the framework was reviewed by participating academics, either at workshops or electronically. It is this curriculum framework that emerged from these deliberations that is the focus of this document.

In addition to the development of a curriculum framework the ACEIE has also to date produced a Concept Workbook and a set of Readers² and has published a number of articles on the topic of Information Ethics. All of these could be used as teaching/learning resources and should, if effectively

2 See Reference List for details of ACEIE publications

used, not only stimulate debates on the impact that the increasing use of information communications technology has on the life world of Africa's inhabitants but also assist in the translation of existing and future research on Information Ethics into teaching and learning opportunities.

ANIE and the ACEIE would like to express our thanks to all those who participated in this curriculum development project in any way, whether through financing, advocacy, organizing of conferences and workshops, research, article writing or constructive input and feedback on various drafts of the final version. Without their contributions this framework might never have materialized. In particular we want to thank Prof Theo Bothma, Dr Cecilia Penzhorn, Dr Marlene Holmner and the team of the University of Pretoria for their constant reflection on work in progress.

The ACEIE publications that include the Curriculum Framework, Workbook, Readers, and Journals will be available to all the higher education institutions selected as part of the pilot project. All of these documents are also available for free on the ANIE / ACEIE website. If required the ACEIE will assist in organizing additional workshops to provide direction and assist institutions and organizations who wish to design and implement their own Information Ethics curricula.

This curriculum framework model was designed and published as a single source of reference to assist participating colleagues. It includes the description of historic research processes, background information, and academic motivations that could contribute to academic objectivity and credibility of the curriculum design process

We trust that the curriculum framework model will assist curriculum developers at higher education institutions in the development of Information Ethics curricula appropriate to their particular contexts and/or situations. We hope, moreover, that the curriculum framework presented here will inspire those responsible for career-related training to design career-oriented training programmes or short courses that will raise awareness of and promote commitment to the ethical use of information and information communications technology in the workplace.

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May 2014

ABOUT THE AUTHORS

BEVERLEY MALAN

Dr Beverley Malan is an educationist with 43 years of experience. She has a doctorate in curriculum studies and has been lecturing extensively in the field of Values and Human Rights in Education. During the course of her career she has served on numerous ministerial committees focusing on the review and development of school and university curricula, the development of teacher qualifications, and the development of a national qualifications framework for South Africa. She has also developed a range of materials for the training of teachers as well as managers at different levels of the education system. She is currently contracted to develop a curriculum on Information Ethics in Africa for the African Centre of Excellence in Information Ethics in South Africa.

COETZEE BESTER

Coetzee Bester formally studied Anthropology, Adult Education and Information Science at the University of Pretoria. After serving as a South African Member of Parliament up to 1999 he researched the value of information in developing communities in more than 25 African countries. He developed a model for the flow of information in developing communities and completed a Master's degree in Information Science (cum laude) at the University of Pretoria. This model is used by various governments, companies and NGO's for policy development and community consultation indicators and sustainable development overviews. His current doctoral research focuses on the development of a curriculum to teach Information Ethics at universities in Africa.

ACRONYMS USED IN THIS DOCUMENT

ANIE	African Network for Information Ethics
UNESCO	United Nations Education, Science and Culture Organization
ACEIE	African Centre for Excellence in Information Ethics
FAIFE,	Free Access to Information and Freedom of Expression
ICT	Information communications technology
IE	Information Ethics
NEPAD	New Partnership for Africa's Development
PAP	Pan African Parliament
UDHR	Universal Declaration of Human Rights
WEF	World Economic Forum
WSIS	World summit on the Information Society

KEY CONCEPTS³

Academic institution – A place where the focus of teaching and learning is on theoretical content and the development of abstract thinking

Academic level – The year level (Year 1, 2, 3, et cetera) at which a particular course (module or subject) is offered

Academic programme – A course of study, usually covering one or more years, leading to a qualification

Access – the right or means of getting into information systems and/or information communications technology

Accessibility – The ease or difficulty with which one can gain access to something

Applied discipline – A career-oriented field of study reflecting the principles of one or more theoretical disciplines

Awareness – Knowledge of the existence or presence of something or someone

Cognitive skills – The ability to *think* something out or to use *reason/logic* to solve a problem

Conceptual knowledge – Knowledge of concepts, ideas, or theories, often referred to as ‘book learning’

Contextual knowledge – Knowledge of places, situations or circumstances, usually acquired through or during real life or work experiences

Converging technologies – Technologies that have merged into a single device, e.g. a SMART PHONE

Cross-disciplinary programme – An academic programme consisting of components which are offered in different faculties or departments

Culture – The way things are done in a particular group, community or nation

Curriculum – The content that has to be covered during a particular period of *course of study*

³ The key concepts presented here are succinctly defined in terms of the meanings attached to them in this document. More detailed clarifications of concepts, with their application to information ethics and curriculum matters can be found in the Glossary (Appendix C), attached to this document.

Curriculum framework – A model or document that serves as a frame of reference for the development of one or more curricula

Cyber crime – The use of information communications technology for activities that are against the law

Digital divide – The gap between those who have open and/or free access to ICT and electronic information systems and those who do not

Discipline – An established field of study which focuses primarily on the acquisition and critical understanding of theoretical knowledge and cognitive skills

Education – A term describing the development of the whole person

Education/training provider – The institution or organization that is responsible for ensuring that education/training takes place.

E-governance – The use of information communications technology by governments to improve service delivery and/or communicate with the public and private sectors

E-learning – The use of information communications technologies for educational purposes

E-literacy – The ability to use information communications technology for different purposes

Ethics – A field of study devoted to the exploration of moral behaviour

Evolution – Gradual development rather than sudden or radical change

Facilitator – A term most often used in the training context, where workshops rather than formal lectures are the norm

Globalization – The inter-connectedness of countries in terms of commerce, trade, education and value systems

Human rights – Rights that can legally be claimed by all human beings

Impact – The effect or influence that one or more things or processes have on something else

Implicit – Implied or suggested rather than directly, or explicitly stated

Indigenous knowledge – Knowledge associated with or unique to a particular culture or people

Information – Meaningfully organized or structured data

Information Age – An age in which the generation, dissemination and use of information play a dominant role in the broad spectrum of human affairs

Information communications technology – Technologies that provide access to information via telecommunications media

Information Ethics – A field of study which focuses specifically on the use and misuse of information as moral/ethical issues

Information ethics issues – behaviour occurrences that reflect the misuse and/or abuse of information and information communications technology

Information and Knowledge Society – A society in which physical, mental, social and economic survival depend on the generation, processing, and free flow of knowledge and information

Information Life Cycle – The cyclical process required to transform raw data into reliable and usable information

Information network – A network devoted to the generation, recording and sharing of information

Information Poverty – Minimal access to or lack of the means to access information needed to improve living quality and/or effective functioning

Information technology practitioners – People who need and use information technology for work purposes

Information technology professionals – People who are trained in the creation, use and repair of information technology devices, networks and operations

Instructional methodologies – The techniques or approaches used to ensure that learners understand content and/or acquire skills

Learners – An umbrella term for all those who are learning something new, regardless of where learning takes place

Learning Content – An umbrella term for everything that has to be learnt (knowledge, skills, values and attitudes)

Lecturer – Typically used to refer to those attached to a higher educational institution

Mainstreamed – A programme that is offered in all institutions of the same kind, universities, for example

Model – A physical or graphic representation of an actual phenomenon or physical structure which shows what the real thing might look like

Module – A semester programme with its own outcomes, content and credits, which could be offered as is or included in a more comprehensive programme

Multi-disciplinary team – A group of academics from different disciplines who work together in the design and/or implementation of a cross-disciplinary programme

Unit – Part of a module or programme which could be offered as a short course

Practical skills – The ability to do something physical

Promote – To spread the word, or ‘market’ a product, idea, programme, activity

Public domain – General society’s “living space and/or an area to which the broad spectrum of society has access

Purpose-focused – Every decision and action taken is aimed at achieving a specific, pre-determined purpose or goal

Research – Reading up on or collecting evidence on something to test its validity, reliability or truth, or to find answers/solutions to important questions

Students – Term used to refer to a specific group of learners, namely those at universities and other higher education institutions

Themes – Focus areas within a particular topic or subject

Training – Associated with skills development, typically used to refer to the kind of learning that takes place in the work environment, workshops or sport field

Transparency – Open, freely accessible, without any attempt being made to hide information from others

Value – Something that one holds dear and which has an influence on one’s decisions or actions.

Values system – A set of values that governs the behaviour of the group or groups of people who developed and/or agreed to accept it as their own

1. INTRODUCTION AND BACKGROUND

Information poverty (access and accessibility) remains a problem in Africa. According to Wild (2013), a comparison of Internet users across Africa, conducted by the *Mail and Guardian* in 2012 found marked differences between African countries as far as internet penetration is concerned (see Figure 1).

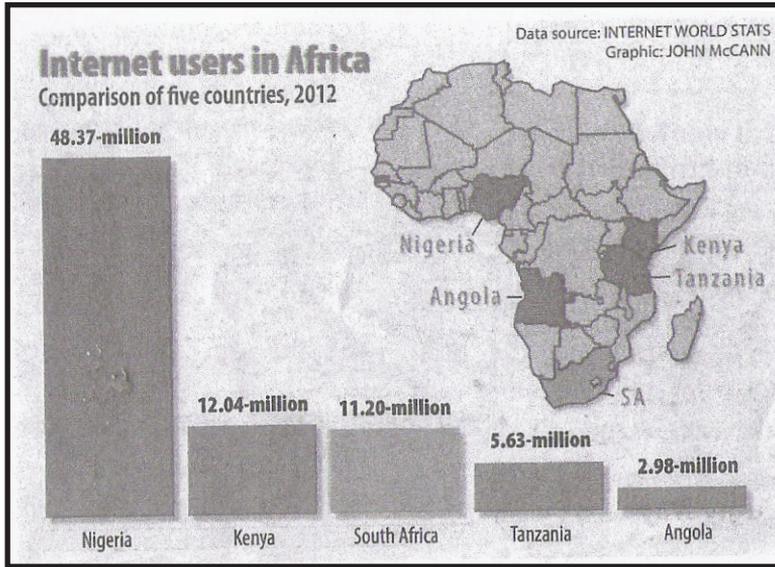


Figure 1: internet users in Africa

Whereas Nigeria seems to be experiencing “an internet boom”, mainly through the use of “cell phone technology” (Wild, 2013), the number of Angolans who are surfing the net seems minimal in comparison. In South Africa indications are that approximately 50 percent of the estimated 25 million people have access to the Internet. Easier and cheaper access to Wi-Fi technology has led to an increasing number of schools deciding to replace learner textbooks with tablets or notebooks. Moreover, a large number of higher education institutions now offer e-learning courses, communicate with students via cell phones, institutional portals or web-sites, and insist that student assignments must be computer-produced rather than hand-written.

E-literacy is not only an essential component of student and workplace performance in an information society but is also a critical factor in global competitiveness. It is, moreover, critical to Africa’s development as an

information and knowledge society. Without access to electronic media, e-learning is, however, relatively useless. This is why the recent construction of various submarine cables, such as SEACOM, is so significant: not only has it increased broadband capacity (*2011 ANIE media statement*) across the African continent but it has made it easier for those with the requisite skills to access and use information communications technology for Internet penetration, e-learning, and e-governance, amongst others.

The flip-side of the coin, however, is that the easier it is to access technology – via mobile phones, for example - and the more technically literate users of information communications technology become, the greater the likelihood that they could use e-information or Information communications technology in ways that are irresponsible or harmful to others. The occurrence of **cyber crime** – a malpractice in which information accessed via information communications technology devices is being accessed or used for illegal purposes – is but one indication that that technology might also have a negative, even a destructive, impact on the moral fabric of society (Floridi, 2006).

One of the possible negative effects of the increased use of advanced information communications technology is that organizations and governments could, for example, could use it to undermine people's rights to privacy, confidentiality and intellectual property – by, for example, collecting or releasing personal information about individuals or other organizations. Prosecution threats to journalists who refuse to reveal the names of their sources (*whistle-blowers, for example*) could be challenged as a violation of the human right to freedom of speech. Governments, especially, walk a fine line in balancing the need for security against the democratic principles of transparency and accountability where access to and dissemination of information is concerned. Whereas unrestricted access to all information might pose a threat to State security, restricted access or censorship might violate citizens' rights to information and/or to freedom of speech (*adapted from 2011 ANIE media statement.*)

Some of the problems caused by the existence of a legislation gap on the one hand and ignorance of what information ethics entails on the other, are information-related - the reliability of sources or the accuracy of information, for example. Others are physical /structural in nature – access to and accessibility of information communications technology being cases in point. Usually, though, challenges are either legal or moral

in nature. Because legislation on information-related matters have not kept up with technological developments (Floridi, 2006), there is a critical need to raise awareness of the ethical problems and challenges inherent in the use of information communications technology. What is needed, so it seems, is education and training on the responsible and accountable use of information on the one hand and of the technologies used to access and disseminate information in the private and public domain on the other.

It is our contention that programmes like these should at least address issues, moral dilemmas or questions relating to the information life cycle - i.e. the “generation, gathering, organization, storage, retrieval and use of information” (Bester & Bothma, 2010, citing Britz, 2010).

Although Information Ethics is offered in some or other form at tertiary institutions in Africa it is not currently mainstreamed⁴. In some instances information ethics issues are addressed in existing programmes, as subject themes or components. At undergraduate level indications are that information ethics features most strongly in *Library and Information Studies* and, to a lesser extent in *Journalism, Communication Studies, Information Sciences, Law, and Health Sciences*. At post-graduate level units on information ethics typically form part of existing *Information Science* programmes⁵.

Existing stand-alone information ethics modules are usually credit-bearing whereas units or themes that form part of existing programmes carry no separate credits. Moreover, the number of credits allocated to modules with very similar content differs widely across higher education. The academic level (*Year 1 to Year 4*) at which specific information ethics themes or issues are addressed also differs across institutions, with Year 4 sometimes being the last year of an undergraduate programme and sometimes being a post-graduate (*Honours*) programme. There is little evidence that information ethics is currently high on the agenda at Master’s or Doctoral levels, suggesting a scarcity of research on critical information ethics issues.

The Curriculum Framework for Information Ethics (IE) in Africa that is presented in this document is meant to enhance, not replace existing

4 See Appendices D and E for information on current/existing university courses that address information ethics issues.

5 See Appendix F for information on current post-graduate courses dealing with information ethics related issues.

university offerings on information ethics. Its function is not to prescribe content that should be taught in specific disciplines; rather, its purpose is to highlight topical issues, possible core content and generic outcomes which are regarded as critical to the development of globally competitive but ethical African information and knowledge societies.

The curriculum framework could serve different purposes: it could be used as a frame of reference for the enrichment of current curriculum offerings on information ethics; it could be offered as is in the form of academic or career-oriented short courses; it could be integrated – in part or in total – into existing academic programmes, or it could be used as basis for the development of new, cross-disciplinary programmes.

Initially the intention with the development of an information ethics curriculum for Africa was to offer it at university level only. The reasoning behind this was that, once they were convinced of the importance of information ethics and had acquired the requisite knowledge and skills, graduates would be able to raise awareness in a range of workplace and social contexts and situations. However, given the increased use and misuse of communications information technologies in society as a whole, and the need expressed by conference and workshop participants outside the university sector the possibility of adapting the university curriculum to the needs of different target groups - journalists, government officials, IT practitioners, and the general public – is now also considered as an opportunity to promote the notion of information ethics amongst society in general.

2. CURRICULUM DEVELOPMENT PROCESS

The term, ‘curriculum development’, as used here, is an umbrella term for four inter-related curriculum development activities, namely *information-gathering*, *design*, *delivery* and *evaluation*⁶. In the development of this particular curriculum framework the process was *iterative* rather than *linear*, i.e. the results of each stage not only fed into subsequent stages but also generated critical reflection on the results and outcomes of preceding processes (see Figure 2).

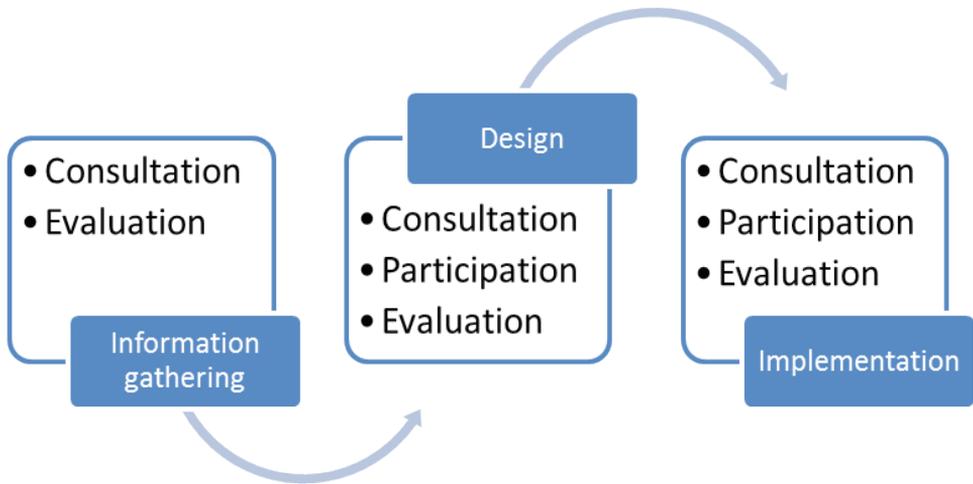


Figure 2: Iterative curriculum development process

As illustrated in Figure 2, *consultation and evaluation* occur at each stage of the process, with curriculum developers either using other people as sounding-boards (*consultation*) or using the evaluation results (*empirical evidence*) as basis for further development. The outcomes/results of each of these two activities determine whether or not the curriculum design and delivery should stay as is or whether there is a need for review and/or adaptation.

Indications that either the design or the implementation of the curriculum is flawed in any way would necessitate change, thus initiating a redesign process or a changed implementation protocol. Positive feedback, on the other hand, would indicate that the focus of further curriculum activities

⁶ See Appendix I for a step-by-step description of the curriculum development processes that could be used by institutional curriculum developers

should be on sustainability, that is, on the provision of support and enrichment where needed.

2.1 Curriculum consultation process

Informed by the African principle of Ubuntu, which reflects a commitment to *inclusivity* and *consensus* as basis for decision-making, the first step in the development of the curriculum framework presented here was consultation - at conferences, seminars and workshops on Information Ethics across Africa. Delegates included academics, students, government officials, and representatives from non-governmental organizations locally and internationally⁷. Post-conference communication with represented institutions was maintained, with recommendations being forwarded to all participants as a matter of course (*2011 ANIE workshop*). Consequently, the curriculum proposals contained in this document represent the consensus view of participating consultants, academics, professionals, and government officials who are interested in and/or committed to the promotion of information ethics in Africa.

The first conference was held in February 2007 in Pretoria, Republic of South Africa. Organized by the University of Pretoria, the event, which took place under the auspices of UNESCO, was sponsored by the Government Department of Communications in South Africa. Conference delegates included policy makers from Africa as well as academics from various universities and disciplines (*Information Technology, Philosophy, Politics and Education*) locally and internationally.

Informed by the Geneva Declaration of Principles, the Tunis Agenda, and the WSIS Action Line C10 on Information Ethics, conference topics focused on both the impact which the use of modern Information and Communication Technologies (ICTs) has on the African continent and on ways of promoting ethical conduct in the use of information and information technology across the continent. There was consensus that, while it was important to take cognizance of global trends in the area of Information ethics, education and training in this area should focus particularly on local issues and needs. It was also agreed that it was important to first establish a discourse on the impact that information communications technology has on the life world

⁷ See Appendix G for a list of conference and workshop participants

of Africa's inhabitants before translating existing research on Information Ethics into teaching and learning opportunities.

Two initiatives of critical importance that emerged from this conference were (a) the formulation of the ***Tshwane Declaration on Information Ethics in Africa*** and (b) the establishment of the ***Africa Network for Information Ethics*** (ANIE).

The Tshwane Declaration noted the necessity of ethical reflection on norms and values for emerging information societies in Africa and served as basis for different interventions aimed at educating and raising awareness on the subject of Information Ethics in Africa. The ANIE mission was to ensure that this happened by addressing uniquely African challenges and utilizing opportunities in Africa through education and training in information ethics. In doing so, ANIE hoped to stimulate critical reflection on existing myths and values around the use of information technology in Africa.

The "ANIE conference" was followed, in February 2009, by a UNESCO Training Workshop on *Information Ethics and e-governance in Sub-Saharan Africa*. The conference, which took place in Magaliesberg, Republic of South Africa, focused not only on the status quo of and planning for e-governance in Africa but also on the ethical challenges associated with the planning, creation and maintenance of e-governance systems and services. A key outcome of the workshop was the production of a ***UNESCO toolkit*** for government officials and information practitioners.

The next two conferences, respectively held in Gaborone, Botswana, in September 2010, and at the University of Pretoria, Republic of South Africa, in September 2012, served to further develop insights gained at the UNESCO Magaliesberg Training Workshop on ways of raising awareness of Information Ethics amongst users of digital technology, policymakers and teachers.

The next information ethics research workshop, held at the University of Pretoria (South Africa), the 2011 workshop on Information Ethics in Africa, (organized by the University of Wisconsin-Milwaukee in the United States of America) and the 3rd international ICSR conference on e-infrastructure and e-services for developing countries, held in Zanzibar (Tanzania) on the 23rd – 24th November 2011 further enhanced insights into the opportunities and challenges for Africa in her development towards a fully fledged information and knowledge society.

In 2012, as a result of ANIE networking activities, the South African Department of Communications entered into a formal agreement with the University of Pretoria to establish a centre at the university that would be known as the ***African Centre of Excellence for Information Ethics*** (ACEIE). The centre was tasked with conducting research on information ethics issues (globally and locally) and to coordinate activities which would enhance awareness and knowledge of information ethics amongst all all stakeholders and role players. The first ACEIE initiative was the organization and facilitation of stakeholder workshops on information ethics, in all nine provinces in South Africa as well as in a number of other African countries. The second initiative was the development of a Curriculum Framework that would serve as basis for the design of institutional-specific Information Ethics curricula.

In 2013 the focus of the ACEIE shifted from discussion to development. First on the agenda was the simultaneous development of an Information Ethics Curriculum Framework and a range of publications that could be used as Information Ethics teaching/learning resources and the development of institutional capacity in the design and implementation of institutionally appropriate Information Ethics curricula at various universities in Africa.

The first workshop on Information Ethics in Practice was held in Zanzibar, Tanzania, from the 22nd to the 29th of October 2013. The first day of the workshop served as an orientation to the notion of Information Ethics as a university course. Having discussed Information Ethics as a concept and a field of study, workshop participants were guided on the role that stakeholders – governmental and non-governmental bodies as well as organizations like NEPAD, the Pan-African Parliament (PAP) and the African Union (AU) - could play in advocating, supporting and monitoring the design and implementation of Information Ethics curricula across Africa and in their own country in particular.

The second day was devoted to the presentation and discussion of the proposed Curriculum Framework for Information Ethics in Africa, ending with recommendations from participants on the way forward, specifically with regard to effective implementation. The focus of the third day was, firstly on ACEIE publications which could serve as teaching-learning resources, and secondly on approaches to the teaching, learning and assessment of Information Ethics content and skills.

The workshop was wrapped up on the fourth day with participant presentations and panel discussions on information ethics in practice constituting the main agenda. Papers reflected not only on the challenges experienced by Tanzanian academics who had already taken the initiative to introduce some Information Ethics elements into their curricula but also on Information Ethics and the disabled and on Information Ethics and Professionalism in Tanzania.

The first session aimed at ***Training the Trainers*** on the proposed Information Ethics Curriculum Framework took place at Makerere University in Uganda, from the 21st tot the 22nd of January 2014. The first day started off with the presentation and discussion of different perspectives (*global, African and digital*) on Information Ethics. This was followed, first by the presentation and discussion of the proposed IE Curriculum Framework, and then by a paper which presented the results of a comparative study of IE teaching in selected LIS (*Library and Information Services*) schools in Uganda.

On the second day workshop participants were given a glimpse into the processes and procedures involved in curriculum design at Ugandan Higher Education institutions. This was followed by group work sessions - on curriculum design and the pedagogical skills required for Information Ethics teaching. The workshop was concluded with recommendations and decisions on the way forward.

2.2 Curriculum design process

Initially the ACEIE plan was to design an Information Ethics curriculum for university students on the African continent only. Conference and workshop discussions indicated, however, that the curriculum should be flexible enough to also accommodate other interested parties (*journalists, government officials, IT practitioners, and other professionals*). Since the envisaged “one size fits all” curriculum for universities in Africa at that stage would not be able to do this the decision was taken to rather design a ***curriculum framework***. Unlike an actual curriculum, which tends to be prescriptive, curriculum frameworks are flexible, creating opportunities for the development of curriculum offerings particular and appropriate to different institutions.

The design of institutionally appropriate Information Ethics curricula is therefore the responsibility of the institutions and/or organizations

opting to be part of the *Information Ethics in Africa project*. In shifting the responsibility for the design of context-specific curricula to those who would also be responsible for its implementation, the ACEIE hopes to minimize the gap that often occurs between the “*ideal curriculum*” (the paper version) and the “*actual curriculum*” (the one eventually being taught in classrooms).

To assist institutional curriculum designers in the development of their own curriculum offerings, the curriculum framework presented in this document highlights topics and themes that could be used to address important issues in the field of Information Ethics, suggests various activities that could be used in the teaching, learning and assessment of knowledge, understanding and skills in the field of information ethics, and indicates which criteria should be used in the selection of curriculum content, teaching-learning resources and in decisions on teaching, learning and assessment methods. In addition to this, the ACEIE has developed a range of curriculum models⁸ that could serve exemplars for the development of institutional curriculum models.

An important part of curriculum development is quality control. It has been our experience that effective control is made easier if those involved in the design and implementation of curriculum offerings reach consensus about the criteria to use during the selection of content, the facilitation of learning, the development of teaching-learning resources and the assessment of student performance. We believe that the criteria used in the design of the curriculum framework could assist institutional curriculum developers in the design, implementation and evaluation of their own curricula. All of these the criteria are derived from the *purpose* of the Information Ethics curriculum, which is to enable students not only to use information communications technology responsibly but also to reflect critically on topical information ethics issues. In order to achieve this purpose, we suggest that curriculum designers should, therefore:

- i) **Select content** that equips students with both *conceptual* and *contextual* knowledge
- ii) **Choose teaching and learning activities** which create opportunities for the development of *cognitive* and *practical* skills
- iii) **Select of develop teaching-learning resources** which lend themselves to the acquisition of both kinds of knowledge (*conceptual and*

⁸ See Appendix H for graphic representations of possible curriculum models

contextual) and the development of both types of skills (*cognitive and practical*)

- iv) **Use assessment methods** that are aligned to the activities used during the acquisition and development of both the knowledge and skills concerned
- v) **Base** selected content, skills development opportunities and assessment methods are based on the **pre-determined outcomes** and appropriate to the **academic year level** concerned

We trust that these criteria, in conjunction with the curriculum models and ACEIE publications (*see Appendix B for a list of these*) will provide institutional curriculum designers with sufficient information to design Information Ethics curriculum offerings that are not only of a high quality but that are also appropriate to their own institutional cultures and contexts.

2.3 Curriculum implementation process

Curriculum implementation is the stage when the curriculum, as conceptualized and designed for a specific purpose, context and target group, is delivered to designated target groups. Implementation typically involves teaching, learning and assessment. While instructional and assessment methods are typically selected by the lecturers/facilitators concerned, we urge them to base their decisions on the needs, academic ability and learning styles of the target group, the nature of the content and skills to be acquired, the institutional context and culture, and their mastered, and their own teaching styles.

The implementation of the curriculum, like its design, is the responsibility of institutions and/or organizations that “buy into” the project. If implementation is to be effective, however, it is critical that those who are going to implement it (*lecturers/facilitators*) are included in the curriculum design process as early as possible. This will ensure that they do not experience the curriculum as being imposed on them; rather, since they were part of its design, they would be committed to making it work.

2.3.1 Instructional methods

Bearing in mind the criteria which, according to the curriculum framework, should be used in the selection of curriculum content lecturers/facilitators

should, in accordance with context-specific needs, use ***instructional methods*** that engage students in activities that give them the opportunity to:

- i) Identify and describe power structures in their own country, institution or work context that exert an influence on information and communication attitudes and practices
- ii) Describe, discuss and compare different business models in the information and communications domain of their own countries and the rest of the world
- iii) Critically reflect on moral (*life world*) attitudes and traditions locally and internationally to determine how these influence attitudes and behaviour in the information and communications domains
- iv) Analyze/deconstruct past, existing and emerging myths (*general and specific*) on the use of information communications technology and the information life cycle
- v) Identify /uncover and critically discuss hidden contradictions and intentions in information theories and practices
- vi) Critically reflect on the politics of Information Ethics
- vii) Relate acquired knowledge and understanding of information ethics to other disciplines – anthropology, sociology, political science, information studies, media studies, computer science, social informatics, law, psychology, liberal arts, and library science, for example - in order to acquire a holistic perspective on human communication as a phenomenon
- viii) Compare different perspectives on information ethics as reflected in, for example, natural and common law, different philosophical traditions (locally and globally), and professional codes of conduct (medicine, media, research, law, etc.)

2.3.2 Staff development

The ***training of lecturers/facilitators*** in the use of these methodologies prior to implementation is critical to successful implementation of the curriculum concerned. Also, given the inter-disciplinary nature of the information ethics curriculum implementation cannot be a one-person show. Given the topics covered it is our contention that it would be best to train a multi-disciplinary team of lecturers/facilitators in the use of some or all of the

activities mentioned in the framework. Such a team would ideally include a philosopher, an *information communications or library and information science specialist*, an *anthropologist or sociologist*, and a *person with legal knowledge and expertise*. In addition to their knowledge of and expertise in their own fields of specialization, team members should be interested in and committed to the promotion of information ethics in Africa.

2.3.3 Time allocation

Time spent on each unit described in the framework is not specified since this will depend on the maturity and academic levels of the learners targeted, the context in which teaching and learning will take place, the purpose (*study or work-related*) to be served by the unit, and the way in which the original unit (*i.e. the one in the framework*) is restructured or adapted (*as a short course, as an element of other units, etc.*).

2.3.4 Instructional resources

For the same reasons **teaching/learning resources** are not prescribed either. Journal articles and other academic texts are critical to higher learning, whereas workbooks and simplified readers are more appropriate to career-oriented or social training sessions. Case studies and *moral dilemma scenarios* are appropriate to both but need to be contextualized in terms of the needs and academic readiness levels of the target group. While these are not prescribed, the range of ACEIE readers and workbooks may be useful as teaching-learning resources (*see Appendix B*). These are available in hard copy as well as on its web-site.

2.3.5 Student assessment

Assessment of learner performance, as envisaged in the framework, should be both formative and summative. Although formative assessment, which is aimed at the identification of learning problems and/or the monitoring of academic progress, should ideally be a continuous process, summative assessment could also be used for this purpose.

- i) **Continuous assessment**, while perhaps more time-consuming enables lecturers/facilitators to identify and address problems as and when they occur since assessment takes place while students/learners are engaged in learning activities (*discussion groups, case study analyses,*

and field work). Lecturers / facilitators could, for example, observe and record the competence and attitudes that students demonstrate during these activities without students even being aware that they are being assessed.

- ii) **Summative assessment**, which has the evaluation of student ability as purpose, takes place at culminating points in the teaching-learning process – end of term, end of year, etc. Summative assessment is usually more formal, with students/learners being required to demonstrate their competence orally, in writing or through practical demonstrations. Because the results of summative assessment would determine whether a student passes or fails the course or subject concerned, both the standard and the results of summative assessments should ideally be externally monitored, ideally by other universities and/or organizations participating in the information ethics curriculum initiative.

2.4 Curriculum evaluation process

Curriculum evaluation is a process aimed at determining (a) the **appropriateness** of the curriculum for a particular context or target group, and (b) the **effectiveness** and **efficiency** of the process by means of which the curriculum is being implemented. While an analysis of learner performance could form part of this evaluation process, learner achievements are by no means the only, or even the most important element of curriculum evaluation. *When* and *how* evaluation takes place depends on *what* exactly it is that is being evaluated as well as on what the evaluation wants to determine, that is, the *reason* for or *purpose* of the evaluation exercise.

As is the case in student assessment, curriculum evaluation is also a dual process, consisting of **summative evaluation** - at culminating points of curriculum development - and **illuminative evaluation** – during design and implementation, hence a continuous process.

- i) The purpose of **summative evaluation** is to *retrospectively* determine the quality and/or effectiveness of completed actions/activities, and output/end results. The appropriateness and effectiveness of the *curriculum design* can, however, only be evaluated once lecturers/facilitators have implemented it: they are the ones who would be most able to indicate what worked and what not, what should stay the

same and what should be changed. The effectiveness of *curriculum implementation* can, however, only be determined by analyzing learner performance in terms of the extent to which the goals/aims of the curriculum have been achieved. This, too, can only be done once learners have completed the whole curriculum. The effectiveness of individual elements of the curriculum could, however, be assessed at the end of the unit/s of which these elements were a part.

- ii) The purpose of ***illuminative evaluation*** is to *pro-actively* highlight problems, successes and other significant features of a program / curriculum (Parlett & Hamilton, cited in Ornstein and Hunkins, 1993:340) as and when they occur. With regard to curriculum design and implementation illuminative evaluation should be an *integral part of the entire process*, i.e. design and implementation problems should be highlighted and addressed/corrected as and when they occur rather than at the end of the process concerned.

Summative evaluation is a formal, systematic and pre-determined process. Illuminative evaluation, on the other hand, typically takes place on an *ad hoc, need to do* basis and consists of observation, inquiry, explanation – all of which may or may not lead to adaptation. Whereas the purpose of summative evaluation is to judge, illuminative evaluation merely describes what is happening. The 'evaluator' does not prescribe what should happen as a result of his/her evaluation: s/he shares his/her experience with the stakeholders but the decision on what to do with it rests with those who 'own' the curriculum. In our case the 'owners' will be institutional, organizational and/or workplace curriculum developers, lecturers/facilitators and quality assurers.

Also, *who* accepts responsibility for the evaluation depends on *what* it is that is to be evaluated – the design of the curriculum, the context in which it is to be implemented, or the effectiveness of the implementation – and *why* the evaluation is deemed necessary. Is evaluation aimed at determining the appropriateness of the context, the ability and/or readiness of teachers/facilitators/lecturers for the kind of curriculum proposed, or the way in which it is being implemented?

As indicated in Figure 2, replicated here for the reader's convenience, evaluation should be an integral part of every stage of the curriculum development process.

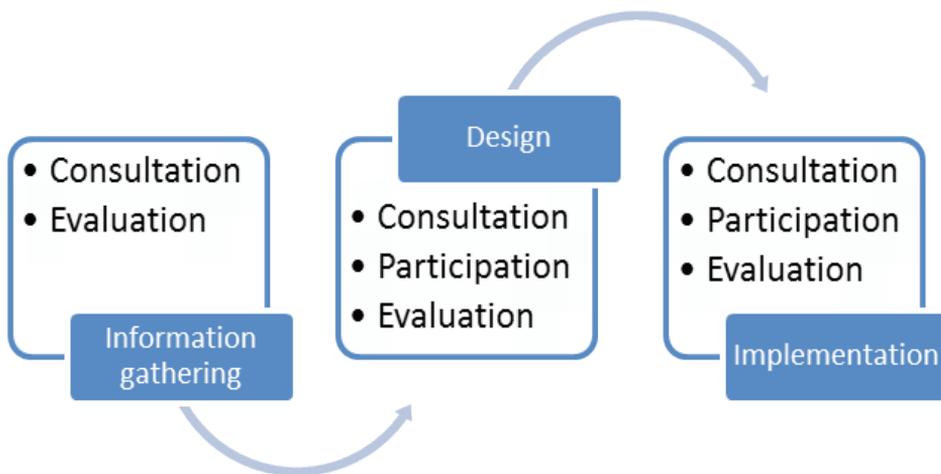


Figure 2: Iterative curriculum development process

In designing the curriculum framework presented in this document, evaluation of attitudinal and institutional readiness for an inter-disciplinary curriculum on *Information Ethics for Africa* took the form of **consultation** – at workshops and conferences but also by means of electronic and other forms of **communication**. Indications from the consultation process were that information ethics teaching and learning are currently not mainstreamed across higher education institutions but that there is a growing awareness of the need for a *core programme* on information ethics that could be offered at all universities and at all academic levels. It was also during the consultation process that it became clear that other parties – professionals, government officials, and the public at large – were keen to receive and offer information ethics education and training.

It is the results of this ‘*illustrative evaluation process*’ that led to the ACEIE’s decision to develop a flexible information ethics curriculum framework rather than a ‘one-size-fits all’ curriculum.

Since institutional curriculum development actions typically occur in “socialized contexts”. Ornstein and Hunkins (1993: 337ff) recommend that those responsible for initiating and managing curriculum development should, prior to its design or implementation, do a detailed analysis of the social context concerned. During the course of this analysis, which is essentially an illustrative evaluation⁹ of the context itself, curriculum developers should:

⁹ Suggestions on ways in which institutional designers could conduct such illustrative

- i) Determine the *values, goals and beliefs* informing the curriculum. In our case these are provided in the introduction and background of this document.
- ii) Obtain a *reading of the community or target group* that will be affected by the curriculum to be offered. We did this with our stakeholders; institutional and workplace curriculum developers need to do this as part of their own curriculum development process.
- iii) Get a *sense of the physical facilities and budget* available and necessary for the design, implementation and evaluation of the curriculum.
- iv) Judge the *pressures for action*, both for and against the proposed curriculum, whether these are generated from within or from without the institution or organization concerned. This includes getting a sense of the *perceptions, expectations and judgments* of those who will be responsible for managing and supporting the curriculum roll-out, either through teaching the content or through involvement in various curriculum activities.

3. CURRICULUM FRAMEWORK

The curriculum framework presented here includes proposals for the education and training of Information Ethics at undergraduate and post-graduate levels. Following the recommendations of conference and workshop participants, content in the undergraduate curriculum framework is structured in the form of five stand-alone units, each addressing a different aspect of information ethics.

All five the units are purpose-focused and, by implication, outcomes-based. The core theme of each unit serves as basis for the formulation of unit outcomes as well as for the selection and structuring of appropriate learning content, instructional methodology and assessment procedures. We believe that this approach will stimulate inter-disciplinary reflection on information ethics issues, an activity that is critical to the development of Africa as an ethical globally competitive information and knowledge society. Curriculum designers at institutions or organizations could choose whether they want to use these units as they are or whether they want to restructure them as short courses, integrate them (*in part or in their entirety*) into existing subjects or programmes, or further develop them into fully-fledged academic programmes.

At post-graduate levels, where the emphasis is on research, the framework proposes that, depending on the academic level concerned, the structure of the curriculum could take different forms depending on the purpose, target group and teaching-learning context. In other words, the curriculum could be structured as course-work, as a combination of coursework and guided research, or as a research programme. In the latter case – i.e. if offered as a research programme - students would be required to conduct independent research on research topics identified by conference participants¹⁰ (*see Appendix 6 for a list of these*), information issues particular to an area of specialization, or inter-disciplinary research on topics chosen in consultation with their study leaders.

At both levels (under- and or post-graduate), the curriculum should equip students not only with the *knowledge, skills and attitudes* they need to responsibly use information and information communications technology in different contexts and circumstances as well as to develop their ability to

¹⁰ See Appendix J for a list of recommended research topics

critically reflect on information-related issues. To ensure that this happens the curriculum has to include *conceptual* and *contextual* knowledge and has to develop learners' **cognitive** and **practical** skills (Capurro, 2007).

To ensure that this happens, the curriculum framework therefore includes as core content:

- i) Key concepts, philosophical perspectives, indigenous knowledge and value systems, information ethics issues (*conceptual knowledge and understanding*).
- ii) Themes dealing with information ethics and the law, the characteristics and development of information and knowledge societies, with specific reference to the challenges that Africa faces in this regard and the opportunities available for her to overcome these (*contextual knowledge and understanding*)
- iii) Activities in which learners have to apply their knowledge and understanding of information ethics in personal, social, academic, business, and career contexts and situations (***practical skills***).
- iv) Activities that require critical reflection, analysis and evaluation - of values, issues, claims and human behaviour. Learners will therefore have to constantly debate the relevance and validity of values, traditions, myths, claims and practices, using their own experience as well as relevant literature as frames of reference (***cognitive reasoning skills***).

It is our recommendation that, in whichever form information ethics is offered at the different institutions, the core content should be similar to that in the curriculum framework while simultaneously taking cognizance of the culture and values of the institution and target group concerned.

3.1 Undergraduate curriculum framework

The undergraduate curriculum framework for Information Ethics consists of five purpose-focused units, each addressing a different aspect of information ethics.

- i) The first unit, *Introduction and Orientation to Information Ethics*, is aimed at providing learners with an overview of information ethics as a concept. In addition, it unit serves as an orientation to subsequent

units, each of which focuses on one of the aspects of information ethics covered in Unit 1.

- ii) Units 2 and 3 focus on *information Ethics and Philosophy* and *information Ethics and the Law* respectively. We suggest that in each of these units the theories informing the discipline concerned – i.e. *Philosophy* and *Law* - should be dealt with in depth before the focus shifts to the exploration of information ethics issues from each disciplinary perspective individually or of both simultaneously.
- iii) The fourth unit, *Information Ethics in Africa*, is aimed at contextualizing the study of information ethics in Africa hence the focus is on information ethics challenges and opportunities in different African countries.
- iv) The fifth and final unit, *Information Ethics in Practice*, gives learners the opportunity to apply their knowledge and understanding of information ethics theories and issues and of the information life cycle to different contexts and situations.

The content and activities included in the curriculum framework were not selected with the purpose of promoting a particular theoretical perspective but rather with the intention to facilitate the integration of perspectives derived from descriptive, emancipatory and philosophical theories. We believe that such integration is particularly appropriate to the study of information ethics since it creates opportunities for lecturers/facilitators and learners to:

- i) **Explore** power structures that influence informational and communication attitudes and traditions in different cultures and epochs - *this is the thrust of descriptive theories*
- ii) **Critically reflect** on moral (life world) attitudes and traditions in the information and communications field - at personal and collective levels (i.e. including normative aspects of such attitudes and traditions) - *the thrust of emancipatory theories*
- iii) **Develop** a philosophical base which integrates diverse disciplines dealing with information technology, thereby ensuring the emergence of a holistic view of human communication as a phenomenon - *the thrust of philosophy*

3.1.1 Unit 1

Introduction and orientation to Information Ethics

As indicated in its title, the first of these five units, *Introduction and Orientation to Information Ethics*, has the orientation of learners to the notion of information ethics as purpose. More specifically the first unit is aimed at (a) clarifying the concept, “information ethics”, (b) at introducing students to the notion of information ethics as a field of study, and (c) to provide students with a brief overview of the themes that will be dealt with in subsequent units.

Given its *foundational* nature, the first unit does *not* require an in-depth study of any of the themes: a brief overview of each topic would be sufficient as an introduction. We do, however, believe that the content of this unit should be covered in some or other way in all information ethics programmes since it forms the basis for a more in-depth study of subsequent themes. Informed by this assumption we recommend not only that the unit should be compulsory for *all first year university students* but also that it should be a *pre-requisite* for admission to all subsequent units.

Pitched at *first year* university level, the first unit could be offered as part of academic orientation to all first year students and/or as a short course to government officials, information practitioners, other professionals and the public at large. In the case of university students, practical application of the knowledge and skills gained could take place in the students’ field/s of specialization, at any or all academic year levels. In the case of learners other than university students, practical application should be context or situation specific.

The primary difference between these two delivery modes would be in the way summative assessments are conducted. In the case of university students, summative assessments could take the form of *written examinations*; practitioners should, however, be required to compile *portfolios of evidence* which reflect the extent of their knowledge, understanding and skills of information ethics and information ethics issues.

3.1.1.1 Unit purpose

The content and instructional methodologies included in this unit were selected with the aim of creating an *awareness of* information ethics and

information ethics issues, an *interest in* information ethics as a field of study, and an *understanding of* the need for information ethics in different contexts and situations. The emphasis in the unit should therefore not be on the in-depth study of any of the themes; rather, it should be on the provision of a broad overview of the themes that will be addressed in subsequent units.

3.1.1.2 Target group/s

The unit is primarily aimed at *first year university students* and *university lecturers* participating in the pilot programme but it could also be used for the *in-service training* of government officials, information practitioners and the *broad spectrum of society*.

3.1.1.3 Unit design

The design of the unit was directed by four questions:

- i) What is ethics?
- ii) What counts as information and how is it generated and accessed?
- iii) What is an information and knowledge society, and does Africa qualify as one?
- iv) What do we mean when we talk about information ethics, and why is the study of information ethics important for the development of knowledge and information societies?

These four questions served as basis for the formulation of learning outcomes and the selection of content. They could, however, also be used to stimulate group and/or class discussions on information ethics prior to the introduction of theoretical content and positions.

3.1.1.4 Learning outcomes

On completion of this unit learners in the identified target groups should have developed the competence described in the unit outcomes, viz.:

- ❖ A *basic understanding* of information ethics as a concept and a field of study
- ❖ An *awareness* of information ethics issues and the impact these could have on the development of their own countries as information and knowledge societies

- ❖ The *ability* to apply and critically reflect on the application of information ethics principles in different contexts and situations

3.1.1.5 Notional learning hours

The time required to achieve the outcomes of this unit has to take cognizance of first year students' (*and other identified target groups'*) maturity, ability and willingness to participate in critical discussions on information ethics issues and challenges.

3.1.1.6 Teaching/learning content and activities

The selection of content was a purpose-focused activity, i.e. content was primarily selected with the purpose of introducing target groups to the notion of information ethics and raising their awareness of issues and challenges in this regard. To ensure that teaching/learning activities would contribute to the achievement of the unit purpose and outcomes we used the proposed teaching/learning content and the identified target groups as basis for the selection of what we regard as appropriate activities.

Having matched curriculum content and teaching/learning activities we arranged them in an order which we regarded as suitable for a unit that has *orientation* as purpose (**see Table 1**). This order is, however, not fixed in stone, and could, if necessary, be adapted to the needs and abilities of different target groups, contexts and situations, provided that all aspects have been addressed by the end of the unit.

Table 1: Introduction and Orientation to Information Ethics

Focus	Content	Methodology
Defining information ethics	<i>Ethics , information and information ethics as concepts</i>	<i>Analyze/discuss</i> different definitions in order to get a better understanding of the meaning of each concept
	<i>Information types & sources</i> (Internet, print media, statistics, word of mouth, research findings, social media, etc)	<i>Compare</i> different types of information in terms of their origin/source, type & purpose
	<i>Evolution and value</i> of information ethics as a field of study	<i>Read and discuss</i> selected texts on information ethics as a field of study
Information ethics issues	<i>Impact</i> of converging technologies on human conditions, value systems and behaviour (computers, Internet, cell phones, social and news media)	<i>Narration and discussion</i> of learner perceptions regarding the impact that converging technologies have on learning, work and living environments
	<i>Misuse</i> of information & information communications technology (in personal, academic, professional & governance, business and marketing spheres)	<i>Analysis</i> of media articles and personal experiences with the misuse of information <i>Discussion</i> of risks involved in using information communications technology as a means of sharing information (<i>share own experiences</i>)
	<i>Principles</i> for responsible information management (accuracy, transparency & accountability)	<i>Critical discussion</i> of the quality, accuracy, source & function/ purpose of different types of information <i>Discussion</i> of impact that poor information management has on the lives of individuals and groups <i>Brainstorming</i> ways in which information & information communications technology could be managed to minimize risks

<i>Focus</i>	<i>Content</i>	<i>Methodology</i>
<i>Ethical reasoning</i>	Information ethics as a <i>values/ moral imperative</i>	<i>Critical discussion</i> of the negative effect that false or misleading information could have on individuals or groups
	<i>Philosophical perspectives</i> on morality	<i>Presentation & comparison</i> of moral principles derived from different philosophical points of view
	<i>Ethical decision-making</i> (moral dilemma discussions , philosophical principles & MOVE, for example)	Use different <i>ethical reasoning techniques</i> to make decisions on information ethics matters (what to disseminate or not; to whom; why/why not; how & when)
<i>Information in context</i>	<i>Contextual application</i> of information ethics (personal, social, academic, work)	<i>Discuss</i> ways in which information ethics could be applied in different real life, study and work contexts and situations <i>Use</i> knowledge and understanding of information ethics and ethical reasoning in the <i>evaluation</i> of real-life incidents, media reports or scenarios dealing with contentious information issues
	Information ethics, globalization & the <i>development of information and knowledge societies</i>	<i>Share ideas</i> on the relationship between globalization, information communications technology and the development of information and knowledge societies <i>Discuss</i> the impact that globalization and information communications technology has on African traditions and value systems <i>Critically discuss</i> the value systems and/or the motives of those driving development initiatives
	<i>Information ethics and the law</i> (synopsis of country-specific media /information laws and/ the legal consequences of breaking these)	<i>Discussion</i> of media articles and reports on legally contested information issues (secrecy, freedom of speech, censorship, etc.)

Explanatory notes

- ❖ Teaching and learning activities should cover all the aspects indicated in the Focus column. The order in which each aspect receives attention would, however, differ from provider to provider. In some instances the four focus areas might even be integrated – around an information ethics news report or a case study reflecting a moral dilemma or transgression of the law, for example. The onus for this kind of decision-making rests with the provider and/or lecturer/facilitator concerned.
- ❖ Content is specified in Column 2 as broad topics only. It is up to curriculum designers and lecturers/facilitators in different contexts to decide on the specifics of each of the content topics mentioned. Information could be found in the ACEIE handbooks and workbooks, journal articles dealing with these topics, the Internet, textbooks, media articles, etc. As a rule the specific content to be covered in each content category specified here would be determined by the target group, the context, the time to be spent on each aspect and the specific goal/s to be achieved.
- ❖ The teaching-learning approaches included in the methodology column are descriptive rather than prescriptive. It is assumed that lecturers/ facilitators tend to find the middle ground between their particular teaching styles and the different learning styles of their target groups. What is important, however, is to ensure that teaching-learning involves all four the language functions - talking, listening, reading and writing - individually, in pairs, in groups, and in plenary sessions. Also, as indicated in the principles informing the framework, the range of teaching-learning activities should create opportunities for lecturers/facilitators and learners to explore and critically analyze power structures that influence attitudes to and behaviour in the information communication technology field, to critically reflect on moral attitudes and traditions in the information communications field and to develop a moral base for decision-making and behaviour in the use of information communication technology.

3.1.2 Unit 2

Information ethics and philosophy

Information Ethics and Philosophy, the second of the five units comprising the information ethics curriculum framework explores the relationship between information ethics and philosophy. The first of the five units, *Introduction and Orientation to Information Ethics*, sensitized learners to the idea that the ethical base of information ethics includes moral principles derived from different philosophical theories. Using this as its point of departure, the second unit focuses on information ethics not as a philosophical theory but as an *applied philosophy*. Understanding this difference, between a pure and an applied discipline, is critical not only to the successful completion of Unit 2 but also to an understanding of the themes covered in the next three units, namely *Information Ethics and the Law*, *Information Ethics in Africa*, and *Information Ethics in Practice*.

Information Ethics and Philosophy, the second unit, could be offered at any academic year level, with the proviso that the depth and scope of content offered, and the instructional methodologies used, reflect the prescribed standards of the academic year level concerned. While the content of this unit is regarded as core knowledge, unit outcomes could be adjusted to reflect differences in the standards that have to be satisfied at each academic year level.

The sequence in which unit content is offered, and the way in which the unit is structured, could also be adjusted to suit the needs and contexts of the university concerned.

- i) Academics responsible for curriculum design might, for example, decide that it would be more appropriate for their students to acquire knowledge on information ethics and the law before they focus on information ethics and philosophy
- ii) Alternatively designers could decide to merge these two units into one, creating opportunities for learners (*students or practitioners*) to discuss information ethics issues from both perspectives simultaneously. The legal and philosophical knowledge and insights gained from these theoretical discussions could then be applied to students' fields of specialization, at any or all academic year levels, with specific reference to the regulation of information processes in

particular career fields and/or to the analysis of relevant professional codes of conduct. In the case of practitioners application would take place in their work context, in relation to work-related information ethics or procedures.

3.1.2.1 Unit purpose

The content and instructional methodologies included in this unit were selected with the aim of developing in students a *critical understanding* of the philosophical principles informing information ethics, an *understanding* of information ethics as an applied philosophy, and a *willingness* to use and manage information, information communications technology and social media in responsible and morally accountable ways.

3.1.2.2 Target group/s

As it stands this unit is aimed at *second year university students and university lecturers* participating in this project but it could, with slight adaptations, also be offered to training facilitators, government officials, and information practitioners with the requisite academic background or experience.

3.1.2.3 Unit design

The design of the first unit was informed by four questions which could be used to stimulate group and/or class discussions on the use of ethical principles as basis for responsible decision-making and behaviour in the field of information and information communications technology.

- i) What does the study of philosophy *entail*?
- ii) In which ways could a study of philosophical theories and/or principles *contribute to the development* of morality and critical thinking skills?
- iii) What are the *similarities and differences* between philosophy and information ethics as fields of study?
- iv) How could critical thinking *contribute to the responsible use* of information communications technology?

These four questions served as basis for the formulation of learning outcomes and the selection of content. The first two questions could be used to develop students' *ability to reflect on and critically discuss* moral

issues in general. The last two questions could be used to develop students' *ability to apply* philosophical principles and reasoning in critical discussions and decision-making on information ethics issues.

3.1.2.4 Learning outcomes

The theory and critical skills dealt with in this unit should assist students in the acquisition and development of:

- ❖ A *moral base* for decision-making and behaviour in the field of information ethics
- ❖ A *critical understanding* of ways in which the misuse of information and information communications technology undermine basic human rights
- ❖ *Critical thinking skills* that could be applied in the analysis and resolution of information ethics issues and challenges
- ❖ A *commitment* to the responsible use of information communications technology in different contexts and situations

3.1.2.5 Notional learning hours:

The time required to achieve the outcomes of this unit will depend on the critical reasoning ability of the students concerned as well as the format and context in which the unit is offered.

3.1.2.6 Teaching/learning content and activities

The selection of content and teaching/learning activities for this unit reflects the *dual purpose* of this unit, namely to *develop* students' critical thinking skills, and to *motivate* them to use information and information communications technology with due regard for societal values and the rights of others. The selection of teaching/learning activities is, moreover, based on the assumption that second-year university students have already developed some skills in *abstract thinking* and that have had some practice in the *use of academic texts* as sources of information.

The *sequence* in which content is presented is informed by these assumptions but, should institutional designers choose to integrate individual unit themes into other subjects, or merge the contents of Units 2 and 3, the order might have to be adjusted.

Table 2: Information Ethics and Philosophy

<i>Theme</i>	<i>Content</i>	<i>Methodology</i>
<i>Philosophy past and present</i>	A mix of classical and modern philosophies relevant to information ethics issues and selected by the institution concerned.	<i>Discussion and analysis</i> of selected philosophies with a view to extracting generic moral principles
<i>Philosophy and critical thinking</i>	<i>Different perspectives</i> on and/or approaches to the enablement of critical thinking appropriate to particular target groups or institutions	<i>Analysis and evaluation</i> of selected philosophical arguments with reference to the premises on which they rest and the principles which they propagate
	<i>Ethical reasoning</i> as basis for responsible decision-making and behaviour	<i>Construction</i> of own philosophical arguments on different issues
<i>Philosophy and information ethics</i>	The <i>impact</i> of technology on human behaviour and value systems	<i>Critical discussion</i> of the impact of converging information communications technologies on values, human rights and human behaviour
	<i>Violations</i> in the use of information and/or information technology as ethical issues (<i>e-waste, hacking Identity theft, pornography, etc.</i>)	<i>Critical analysis</i> of case studies illustrating responsible & irresponsible use of information or information communications technology
	The <i>evolution</i> of information ethics as a practice and field of study	<i>Review and discussion</i> of academic texts dealing with the evolution of information ethics
	<i>Moral / (philosophical) principles</i> and information ethics (<i>honesty, Integrity, accuracy, trust responsibility Ubuntu, social justice, etc.</i>)	<i>Theoretical debates</i> on the reasons for violations and ways of preventing their occurrence

Explanatory notes

- ❖ Teaching and learning activities should cover all the aspects indicated in the Focus column. The order in which each receives attention would, however, differ from provider to provider. In some instances the four focus areas might even be integrated – around an information ethics news report, case study reflecting a moral dilemma or transgression

of the law, for example. The onus for this kind of decision-making rests with the provider and/or lecturer/facilitator concerned.

- ❖ Content is specified in Column 2 as broad topics only. It is up to curriculum developers and lecturers/facilitators in different contexts to decide on the specifics of each of the content topics mentioned. Information could be found in the ACEIE handbooks and workbooks, journal articles dealing with these topics, the Internet, textbooks, media articles, etc. As a rule the specific content to be covered in each content category specified here would be determined by the target group, the context, the time to be spent on each aspect and the specific goal/s to be achieved.
- ❖ The teaching-learning approaches included in the methodology column are descriptive rather than prescriptive. It is assumed that lecturers/ facilitators typically find the middle ground between their particular teaching styles and the different learning styles of their target groups. What is important, however, is to ensure that teaching-learning includes talking, listening, reading and writing - individually, in pairs, in groups, and in plenary sessions. Also, as indicated in the principles informing the framework as such, the range of teaching-learning activities should create opportunities for lecturers/facilitators and learners to explore and critically analyze power structures that influence attitudes to and behaviour in the information communication technology field, to critically reflect on moral attitudes and traditions in the information communications field and to develop a moral base for decision-making and behaviour in the use of information communication technology.

3.1.3 Unit 3

Information ethics and the Law

Information Ethics and the Law is envisaged as the third of five units of the proposed information ethics curriculum framework. Based on the assumption that learners already know what information ethics is (*Units 1*) and have acquired the thinking skills necessary to critically engage with information ethics issues (*Unit 2*), Unit 3 focuses on the **legal dimensions** of information ethics. More specifically, this unit has the development

of learners' knowledge and understanding of media and information legislation in their own countries as purpose.

Once learners *know and understand* what the law says about media and information matters they should be able to *critically reflect* not only on the functions served by such legislation in information and knowledge societies but also on the ways in which these either promote or undermine citizens' human rights. This unit therefore serves as a vehicle for the integration of ethical and legal perspectives on information ethics, an integration that is critical to the mastery of content in Unit 4, *Information Ethics in Africa*, and the application of learners' knowledge and understanding of information in different situations and contexts as required in Unit 5, *Information Ethics in Practice*.

Unit 3 could be offered at any academic year level, with the proviso that the depth and scope of content offered and the instructional methodologies used are in accordance with the prescribed standards of the year level concerned. While the content of the unit is regarded as core, and therefore compulsory for university studies, unit outcomes could be adjusted to reflect the appropriate standards for different academic year levels. The sequence in which unit content is offered and the way in which the units are structured could also be adjusted to suit the needs and context of the specific university.

- i) Academics responsible for curriculum design might, for example, decide to start with a study of their own country's media and information legislation (*Unit 3*) before embarking on a philosophical discussion of information ethics (*Unit 2*)
- ii) Alternatively they might decide to merge the content of Unit 2 (*philosophical perspectives on information ethics*) and Unit 3 (*legal perspectives on information ethics*) by focusing on contentious issues which reflect the differences and similarities between these two perspectives in the field of information ethics.
- iii) They could also decide to discuss both the philosophical and the legal perspectives spelt out in Units 2 and 3 in African and/or workplace contexts and/or in the context of university students' academic specializations (*Units 4 and 5*).
- iv) Application of knowledge and skills gained in students' fields of specialization could occur at any or all academic year levels, with

specific reference to the regulation of information processes in specific career fields and/or the analysis of relevant professional codes of conduct.

3.1.3.1 Unit purpose

This unit serves a *dual purpose*, namely to (a) *develop* students' understanding of media and information legislation in their own countries , and (b) to *provide* them with the opportunity to critically reflect on the need or not for such legislation in information and knowledge societies.

3.1.3.2 Target group/s

As it stands this unit is aimed at *third year university students and university lecturers* participating in this project but it could, with slight adaptations, also be offered to training facilitators, government officials and information practitioners with the requisite academic background or workplace experience.

3.1.3.3 Unit design

The formulation of learning outcomes and the selection of unit content were informed by four key questions, namely:

- i) *What* does the law say about the use and misuse of information and information communications technology
- ii) To what *extent* are philosophical/ethical principles reflected in media and information laws?
- iii) Which *human rights* should be protected by information and media laws and why?
- iv) To what extent are philosophical principles *reflected* or *contradicted* in information and media legislation and/or regulations?

All four questions could also be used to encourage class discussion or stimulate critical reflection on legislation and its societal functions. The first two questions could be used to determine students' assumptions about the need to take cognizance of different philosophical principles and/or to reflect on the nature and purpose of philosophy as a field of study. The first and third questions could be used to determine the extent of students' philosophical and legislative knowledge and understanding prior

to instruction, and the last one to determine whether or not students are able to discuss information ethics issues from different perspectives.

3.1.3.4 Learning outcomes

On completion of this unit, students should have

- ❖ Acquired *sufficient knowledge* of their own country's information and media laws to know when these are being breached and what the consequences of such breaches would be
- ❖ Developed a *critical awareness* of citizens' rights and responsibilities in the field of information and information communications technology
- ❖ Become *aware* of tensions/conflicts between legal and philosophical perspectives on information rights and responsibilities

3.1.3.5 Notional learning hours:

The time required to achieve the outcomes of this unit will depend on students' prior knowledge of their country's legislation, the quality of their critical thinking and reasoning skills and their willingness and ability to apply these in different contexts and situations.

3.1.3.6 Teaching/learning content and activities

The selection of content and teaching/learning activities for this unit were derived from the unit purpose and outcomes, which expect students to know, understand and be able to critically reflect on information legislation in their own countries. Teaching /learning activities were matched to the content as well as to the assumed academic ability of the average third-year university student.

The sequence in which content is presented is informed by these assumptions but, should institutional designers choose to integrate individual unit themes into other subjects, or merge the contents of Units 2 and 3, the order might have to be adjusted.

Table 3: Information Ethics and the Law

Theme	Content	Methodology
<p>Information ethics and human rights</p>	<p>Human rights declarations (<i>UDHR, National Constitution and/or Bill of Rights</i>)</p>	<p><i>Identify, list and discuss</i> information related human rights in the United Declaration of Human Rights (UDHR) and the Constitution or Bill of Rights of the country concerned</p>
	<p>Information –related human rights (<i>access, human dignity, privacy, freedom of expression, intellectual property</i>)</p>	<p><i>Reflect on and critically discuss</i>, with reference to the <i>reading of academic texts</i>, ways in which the use of information communications technology could affect/undermine information-related human rights</p>
<p>Regulation of information and the media</p>	<p>Information & media laws (<i>national & international</i>)</p>	<p><i>In-depth study and discussion</i> of legislative and other measures (<i>national & international</i>) taken to regulate access to & dissemination of information on various fronts <i>Discuss</i> typical violations of these regulations (<i>own experience or media reports</i>) and the consequences associated with <i>these</i> (<i>pornography, libel, character assassination, cyber bullying, hacking, etc.</i>) <i>Distinguish</i> between regulatory measures that undermine and protect citizens’ information-related human rights (<i>e.g. censorship, surveillance & collection & dissemination of private/personal information</i>)</p>

<i>Theme</i>	<i>Content</i>	<i>Methodology</i>
<i>Information ethics, philosophy and the law</i>	Correlation and conflict in legal and philosophical positions on information-related matters (<i>human rights versus human responsibilities</i>)	<i>Determine</i> whether or not any of the philosophical principles on morality are reflected in the information & media regulations concerned (rights versus responsibilities & FAIFE, e.g.) <i>Debate</i> the extent to which the legislation concerned promotes or ignores the need for information ethics <i>Critically discuss</i> specific violations of media/information regulations that indicate possible tensions in legal and philosophical positions (<i>rights versus responsibilities, appropriateness, etc</i>) and <i>suggest</i> ways in which such conflicts might be resolved

Explanatory notes

- ❖ Teaching and learning activities should cover all the aspects indicated in the Focus column. The order in which each receives attention would, however, differ from provider to provider. In some instances the four focus areas might even be integrated – around an information ethics news report, case study reflecting a moral dilemma or transgression of the law, for example. The onus for this kind of decision-making rests with the provider and/or lecturer/facilitator concerned.
- ❖ Content is specified in Column 2 as broad topics only. It is up to curriculum developers and lecturers/facilitators in different contexts to decide on the specifics of each of the content topics mentioned. Information could be found in the ACEIE handbooks and workbooks, journal articles dealing with these topics, the Internet, textbooks, media articles, etc. As a rule the specific content to be covered in each content category specified here would be determined by the target group, the context, the time to be spent on each aspect and the specific goal/s to be achieved.
- ❖ The teaching-learning approaches included in the methodology column are descriptive rather than prescriptive. It is assumed that

lecturers/ facilitators typically find the middle ground between their particular teaching styles and the different learning styles of their target groups. What is important, however, is to ensure that teaching-learning includes talking, listening, reading and writing - individually, in pairs, in groups, and in plenary sessions. Also, as indicated in the principles informing the framework as such, the range of teaching-learning activities should create opportunities for lecturers/facilitators and learners to explore and critically analyze power structures that influence attitudes to and behaviour in the information communication technology field, to critically reflect on moral attitudes and traditions in the information communications field and to develop a moral base for decision-making and behaviour in the use of information communication technology.

3.1.4 Unit 4

Information ethics in Africa

As indicated in the background description of the curriculum framework, the focus of the curriculum as a whole is on the development of Africa in terms of information ethics. While this African focus is *implicitly* addressed in the other units, in terms of the use of information communications technology, (*Unit 1: Introduction and Orientation to Information Ethics*), values and human rights (*Unit 2: information Ethics and Philosophy*), media and communications legislation (*Unit 3: Information Ethics and the Law*), and contextual application (*Unit 5: Information Ethics in Practice*), Unit 4 (*Information Ethics in Africa*) focuses *explicitly* on Africa and her needs – her context, value systems, challenges and opportunities in the field of information ethics.

In terms of curriculum structure the framework places this unit after the units dealing with moral values (*Unit 2*) and legislation (*Unit 3*). The reasoning informing this sequence was that learners have to acquire knowledge of and skills in ethical reasoning and legal matters in order to analyze and/or critically reflect on the specific values and laws being compared in Unit 4.

Institutional or workplace curriculum developers could, however, decide to:

- i) Integrate generic philosophical and legal themes into a unit or module on African development in the field of information ethics

- ii) Start with this unit (*Information Ethics in Africa*), using it as basis for the acquisition of generic philosophical and legal knowledge
- iii) Integrate the content of this unit into all the other units to retain an explicit focus on African development throughout

Choices regarding the structuring and sequencing of content on information ethics matters are entirely in the hands of institutional and workplace curriculum developers. It is after all they who will have to account for the impact that the curriculum has on learners' eventual attitudes to and ways of engaging with information communications technology. The only provisos are that:

- i) All the *themes* included in the framework should be dealt with
- ii) *Teaching-learning activities* should promote learners' ability to explore, describe, analyze and evaluate information ethics issues
- iii) The way in which *learner performance* is assessed should be aligned to the activities used in the teaching and learning of the relevant content and skills.

3.1.4.1 Unit purpose

The content and instructional methodologies included in this unit were selected with the aim of enabling students to *reflect* not only *on* the *challenges* that African countries face in their development towards becoming fully fledged information societies but also on the *opportunities* available to them to overcome these.

3.1.4.2 Target group/s

As it stands this unit is aimed at *fourth year university students and university lecturers* participating in this project but it could, with slight adaptations, also be offered to training facilitators, government officials and information practitioners with the requisite academic background, workplace experience, or expertise in African affairs.

3.1.4.3 Unit design

The design of the first unit was informed by four questions, which served as basis for the formulation of learning outcomes and the selection of content. These questions are:

- i) What *distinguishes* information and knowledge societies from other societies?
- ii) How do African countries *compare* with other nations in terms of their status as information and knowledge societies?
- iii) Which *challenges* do African countries face in their efforts to become fully fledged information and knowledge societies, and which *opportunities* are available to them to overcome these challenges?
- iv) How could *indigenous African knowledge and value systems* contribute to the development of African countries as information and knowledge societies?

These questions could also be used to direct group and class discussions on the topics and themes included as unit content. They could even be used as topics for written assignments and/or examinations since they provide students with the opportunity to apply their legal and philosophical insights as well as their critical thinking skills to discussions on African challenges and opportunities in the field of information ethics.

3.1.4.4 Learning outcomes

On completion of this unit students should have:

- ❖ *Read widely on and critically discussed* information ethics issues in Africa
- ❖ Developed an *appreciation of Africa* as a developing information and knowledge society
- ❖ Become *critically aware* of the ways in which African and other knowledge and value systems affect the development of information and knowledge societies in different African countries
- ❖ Committed themselves to overcoming the challenges Africa faces in becoming an ethically competitive information and knowledge society

3.1.4.5 Notional learning hours

The time required to achieve the outcomes of this unit will depend on students' knowledge of Africa and her value systems as well as on their willingness and ability to honestly and objectively discuss not only their own countries' strengths and weaknesses in the field of information

communications technology but also the ways in which myths, traditions and value systems could both hinder and promote development in this area.

3.1.4.6 Teaching/learning content and activities

Informed by the purpose of the unit, namely to *reflect* on the development of Africa as an information and knowledge society, selected content focuses on African as well as global affairs/ issues in the area of information ethics and the use of information communication technology. The selection of teaching/learning activities is based on the assumption that fourth-year university students are already able to *write literature reviews* of academic texts and are able to *defend their own position* on contentious issues with reference to such reviews. Suggested teaching/learning activities also reflect *African ways of thinking and learning*, much of it requiring talking, listening and working together.

The sequence in which content is presented is informed by these assumptions but, should institutional designers choose to integrate individual unit themes into other subjects or merge the content of this unit into one or more of the other units the order might have to be adjusted.

Table 4: Information Ethics in Africa

Theme	Content	Methodology
Information & knowledge societies	<i>Features/characteristics distinctive of information and knowledge societies (attitudes, systems, use of converging technologies)</i>	<i>Identify features (attitudes, systems, use of converging technologies) in academic texts on information and knowledge societies Critical discussion of indicators that measure and compare the status /ranking of information and knowledge societies Analysis of case studies (locally & internationally) that reflect the existence of different tiers of knowledge & information societies</i>
	<i>Evolution and purposes served by information and knowledge societies in the 21st century</i>	<i>Critically reflect, with reference to relevant academic texts, on the relationship between technological development, globalization and the evolution of information and knowledge societies across the world.</i>
Africa as an evolving macro-level information and knowledge society	<i>Current status of Africa as a whole and of African countries individually as information and knowledge societies</i>	<i>Discussion /comparison of case studies illustrating different African countries' status /ranking as information & knowledge societies and of initiatives taken towards further development</i>
	<i>Opportunities and challenges in the development of information and knowledge societies in Africa</i> <ul style="list-style-type: none"> ▪ African knowledge and value systems ▪ African oral & narrative traditions ▪ Socio-political & economic factors ▪ Rapid pace at which information communications technology evolves and changes ▪ Infra-structural factors 	<i>Critical reflection and discussion of the ways in which African traditions, values and knowledge systems could be used to either hinder or support the development of information and knowledge societies on the African continent</i>

Theme	Content	Methodology
Information ethics in Africa	<p>The <i>use and misuse</i> of information networks & technologies <i>in Africa</i></p> <ul style="list-style-type: none"> ▪ Personal sphere (<i>e-mails, e-books, music, finance & entertainment</i>) ▪ Social sphere (use of Internet & mobile devices (<i>Skype, twitter, tweet & create face-book profiles</i>)) ▪ Educational sphere (<i>Internet as access to information; use of Wi-Fi technology in institutions of learning</i>) ▪ Business (<i>advertising, web-sites, e-billing, property transactions, e-commerce</i>) ▪ Governance (<i>e-governance, evolving data-driven systems, communication, propaganda</i>) ▪ Cloud computing, robotics & other emerging trends 	<p><i>Narration and discussion</i> of learners' own use of and/or exposure to technologies used for the purposes listed in the middle column of this table</p> <p><i>Comparison</i> of experiential narratives and international case studies</p> <p><i>Critical discussion</i> of available statistics, media reports & other case studies</p>

Explanatory notes

- ❖ Teaching and learning activities should cover all the aspects indicated in the Focus column. The order in which each receives attention would, however, differ from provider to provider. In some instances the four focus areas might even be integrated – around an information ethics news report, case study reflecting a moral dilemma or transgression of the law, for example. The onus for this kind of decision-making rests with the provider and/or lecturer/facilitator concerned.
- ❖ Content is specified in Column 2 as broad topics only. It is up to curriculum developers and lecturers/facilitators in different contexts to decide on the specifics of each of the content topics mentioned. Information could be found in the ACEIE handbooks and workbooks, journal articles dealing with these topics, the Internet, textbooks, media articles, etc. As a rule the specific content to be covered in each content category specified here would be determined by the target group, the context, the time to be spent on each aspect and the specific goal/s to be achieved.

- ❖ The teaching-learning approaches included in the methodology column are descriptive rather than prescriptive. It is assumed that lecturers/ facilitators typically find the middle ground between their particular teaching styles and the different learning styles of their target groups. What is important, however, is to ensure that teaching-learning includes talking, listening, reading and writing - individually, in pairs, in groups, and in plenary sessions. Also, as indicated in the principles informing the framework as such, the range of teaching-learning activities should create opportunities for lecturers/facilitators and learners to explore and critically analyze power structures that influence attitudes to and behaviour in the information communication technology field, to critically reflect on moral attitudes and traditions in the information communications field and to develop a moral base for decision-making and behaviour in the use of information communication technology.

3.1.5 Unit 5

Contextual application of information ethics

The fifth and final unit, *Information Ethics in Practice*, gives learners the opportunity to apply their knowledge and understanding of information ethics issues and the information life cycle to different contexts and situations.

Informed by the assumption that learners have already acquired the knowledge, understanding and skills that were the focus of the first four units - *Introduction and Orientation to Information Ethics*, *information Ethics and Philosophy*, *information Ethics and the Law*, and *Information Ethics in Africa* – this unit is aimed at the creation of opportunities for **application**. More specifically the expectation is that students will *use their understanding of ethics and the law as basis for decision-making* and the use of information communications technology, in general and in specific contexts.

It is this kind of reasoning that resulted in this being the final unit in the framework. Institutional and/or workplace curriculum developers might well decide, however, that application opportunities should be created from the beginning. Should this be the case, *cross-disciplinary integration* will take place throughout the entire programme, with Unit 5 (*Application*) disappearing as a separate unit but featuring as application exercises in all

subject areas and at all year levels. Required applications should, however, be aligned to the unit content that preceded the application exercise – for example, critical discussion of legal issues following the acquisition of legal knowledge and understanding. Also, the kind of application required should be aligned to the academic and/or practical standards applicable at the different year levels of the subject concerned.

While the outcomes for Unit 5 are the same, irrespective of the disciplinary / work context in which application occurs, the actual content and delivery mode should ideally be determined by a team consisting of academics and/or experts in the discipline or career field concerned. In the case of university students, application could be integrated into existing programmes if and where relevant at any or all academic year levels. In the case of practitioners, application could happen in the workplace while they are busy with the first unit already: supervisors or line managers could either assess their ability to apply knowledge, understanding and skills gained by continually observing them in the course of their daily work, and/or they could require those concerned to compile a portfolio of evidence on completion of the unit.

3.1.5.1 Unit purpose

This unit has as purpose the development of students' *ability to practically apply* their theoretical knowledge and understanding of information ethics as well as their ethical and legal reasoning skills in their own life, learning and work contexts.

3.1.5.2 Target group/s

As is the case with Unit 1, this unit could be used in the training of different target groups, with particular reference to university students, civil servants and information practitioners in a range of career fields.

3.1.5.3 Unit design

The design of this unit was informed by a single question, namely whether or not students would be able to apply the knowledge, understanding and reasoning skills they acquired during the course of their study of information ethics in their own studies, in work contexts as well as in other contexts and situations.

We assumed this could best be done if students are given the opportunity of doing so in their academic fields of specialization or, in the case of those already working, in their work contexts. Since specialists in these fields are the ones who are best equipped to determine how this could be done, we have left these decisions to them. What we provide them with here is a bare outline of what we think the focus should be and how we envisage that this could be done.

3.1.5.4 Learning outcomes

Since the emphasis of this unit is on the practical application of acquired knowledge, understanding and reasoning skills in the field of information ethics students should, on its completion, be able to:

- ❖ *Use* information and information communications technology in a morally responsible and accountable manner
- ❖ *Act* as information ethics change agents by sharing their own knowledge, understanding and skills in the field of information ethics with those in their sphere of influence

3.1.5.5 Notional learning hours:

The time required to achieve the outcomes of this unit will differ depending on the context in which application takes place.

3.1.5.6 Teaching/learning content and activities

The specific content and teaching/learning activities for this unit will be determined either by the academics in whose discipline the students apply their information ethics knowledge, understanding and skills, or by managers or supervisors in workplace contexts and circumstances. What we present here are merely generic notions of the application opportunities which could be created. Approaches to teaching, learning and assessment will depend on the group targeted for application, the heuristics of the subject/discipline concerned, and/or the work context in which application is to take place.

Table 5: Contextual application of Information Ethics

Theme	Content	Activities
Practical application of information ethics in different context and situations	<i>Responsible use of information and information communications technology academic learning or career-related activities</i>	<i>Define/describe ethical conduct in terms of selected context</i>
	<i>Knowledge of and critical reflection on the presence of information ethics in academic protocol and/or professional codes of conduct</i>	<i>Develop a values-based code of conduct applicable to the profession/occupation for which this discipline/subject is a pre-requisite</i> <i>Describe the ethical dimensions of processes to be followed in the development and implementation of codes of conduct</i>

Explanatory notes

- ❖ Teaching and learning activities should cover all the aspects indicated in the **Focus** column. The order in which each receives attention would, however, differ from provider to provider. In some instances the four focus areas might even be integrated – around an information ethics news report, case study reflecting a moral dilemma or transgression of the law, for example. The onus for this kind of decision-making rests with the provider and/or lecturer/facilitator concerned.
- ❖ **Content** is specified in Column 2 as broad topics only. It is up to curriculum developers and lecturers/facilitators in different contexts to decide on the specifics of each of the content topics mentioned. Information could be found in the ACEIE handbooks and workbooks, journal articles dealing with these topics, the Internet, textbooks, media articles, etc. As a rule the specific content to be covered in each content category specified here would be determined by the target group, the context, the time to be spent on each aspect and the specific goal/s to be achieved.
- ❖ The teaching-learning methods/approaches suggested in the **Activities** column are descriptive rather than prescriptive. It is assumed that lecturers/ facilitators typically find the middle ground between their particular teaching styles and the different learning styles of their target groups. What is important, however, is to ensure that teaching-

learning includes talking, listening, reading and writing - individually, in pairs, in groups, and in plenary sessions. Also, as indicated in the principles informing the framework as such, the range of teaching-learning activities should create opportunities for lecturers/facilitators and learners to explore and critically analyze power structures that influence attitudes to and behaviour in the information communication technology field, to critically reflect on moral attitudes and traditions in the information communications field and to develop a moral base for decision-making and behaviour in the use of information communication technology.

3.2 POST-GRADUATE CURRICULUM FRAMEWORK

The premise on which the conceptualization of a post-graduate framework was based was the assumption that the emphasis of all post-graduate studies is on **research**. Post-graduate programmes take different forms: sometimes they consist of *course-work* only, sometimes of a *combination of coursework and guided research* and, at doctoral level, usually of *independent, or sometimes, supervised, research*.

Having taken cognizance of differences in the programmes offered by different universities on the African continent, we decided to include generic proposals for the design of Honours, Master's and Doctoral programmes without prescribing structure, time of delivery mode. The idea is that universities could use the proposals on post-graduate programmes as guidelines, no more, for the design of their own post-graduate programmes.

The choice of research topics is, of course the prerogative of the student and/or his/her supervisor. Conference delegates and workshop participants have, however, identified a number of areas which they believe to be worthy of research. A list of these topics, for the consideration of prospective researchers, is attached to this document as *Appendix F*.

3.2.1 Proposals for Honours and Coursework Masters programmes

Universities that offer Honours and coursework Masters Programmes typically do so for two reasons, viz. to:

- i) Further develop students' theoretical knowledge and understanding of their particular academic specializations

- ii) Introduce students to basic research paradigms and methods particular to their area of specialization

Since information ethics is not currently offered as a programme in its own right at any university, students at Honours or Coursework Masters' level who are interested in information ethics issues would probably have to do so *within the context of their undergraduate disciplinary studies*. They would, however, need an *additional knowledge base* – Information Ethics - if they want to focus on information ethics issues in their own area of specialization.

We believe that it is possible to use the units in the undergraduate curriculum framework as basis for the development of an Honours and/or coursework Masters module/programme on Information Ethics. The topics and themes in these units could be studied *in greater depth* and/or approached from a *different angle*, with the focus being on *analysis and evaluation* rather than merely on the acquisition of knowledge and understanding (*see Appendix F for examples of Honours modules*).

Included in this module/programme should be a unit on *information ethics research*. Since information ethics is inter-disciplinary in nature we believe that research into information ethics issues should also be inter-disciplinary. Also, since information ethics education is issue-oriented, we believe that the research module should educate students in the use of different theoretical paradigms and research methodologies which could be merged into a methodology suited to their own research interest at Masters' or Doctoral levels.

3.2.2 Research Masters' and Doctoral programmes

It is our understanding that research at Masters' and Doctoral levels differ in purpose, depth and scope. Whereas *Masters' research* is aimed at developing and demonstrating students' *ability to use one or more theoretical frameworks to summarize, critically analyze and empirically investigate existing academic positions on a particular topic or problem*, doctoral research is aimed at the *generation of new, empirically-based knowledge*. Moreover, while Masters' students have to write a **dissertation** (*the outcome of the programme*), doctoral students are required to write a full-length **thesis**.

Both Masters' and doctoral students could conduct research into ethical issues related to their own academic specialization or career field, or they could conduct research in one of the topics identified by conference delegates during the course of the curriculum consultation process described earlier. These include the need for research on *the design of information ethics curricula*, *the use of case studies in the teaching of information ethics*, *digital scholarship*, and *staff training* in the area of information ethics.

Whatever the specific research topic, conference delegates agreed that research should preferably focus on four areas, viz.

- ❖ *Ethical theories in Africa*
- ❖ *Intercultural Information Ethics and information communications technology*
- ❖ *Information Ethics in predominantly oral communities / societies*
- ❖ *Information communications technology and development*

However, we would argue that, unless students at these levels have had the opportunity to study information ethics – either as part of their academic specialization or in another form – they would, in addition to the reviewing of literature on their topic of interest, also have to conduct an in-depth study of the issues and themes included in the undergraduate information ethics curriculum framework.

4. CONCLUSION

It is our expectation that the Curriculum Framework for Information Ethics in Africa will contribute to the development of capacity at participating universities to formally teach Information Ethics and related matters to an African audience in support of the UNESCO Strategic Objective 9. Support for this project, and research on issues raised in the curriculum, will not only enhance the implementation and roll-out of Information Ethics offerings at universities and academic institutions in Africa but could also motivate academics to create a greater awareness of the need for ***ethical guidelines*** in society as a whole.

We trust that the project will directly and indirectly also address the need for ***empowerment*** in all sectors of information and knowledge societies – primarily through policies and investment in information and communications technology infrastructure, equipment and training. Empowerment initiatives could include community forum discussions, workshops, train-the-trainer events, et cetera.

Training could take place within a formal or informal environment and may include short courses and qualifications for information and knowledge practitioners. Initiatives like these could be launched by academics and/or students in conjunction with other stakeholders and interested parties. We suggest, however, that the size of any ‘empowerment group’ should not exceed 25 persons (project partners included): larger groups are more difficult to manage and might take too long to resolve differences and develop strategies so urgently required for the development of the African continent as a competitive, ethical macro information and knowledge society.

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APPENDIX A

Origin and development of the African Centre for Excellence in Information Ethics (ACEIE)

The establishment of the *African Centre for Excellence in Information Ethics* (ACEIE), in 2012 was made possible by the signing of a formal Memorandum of Agreement between the South African Department of Communication and the University of Pretoria in 2012. In terms of this agreement the centre – i.e. the ACEIE – which had to serve as a centre of excellence on information ethics for the whole of Africa, had to conduct research on information ethics issues (globally and locally), coordinate activities which would create an awareness of information ethics, develop and implement an Information Ethics curriculum at twelve universities across Africa. In turn, the Department of Communication would allocate R 7.4m (about \$1m) of its budget to the centre over a period of three years.

The basis for the establishment of such a centre was, however, laid in 2007, when a group of international academics in the fields of *Information Technology, Philosophy* and *Politics* attended an *African Conference on Information Ethics*. The conference was held in Pretoria, RSA, under the auspices of the South-African Government and the official patronage of UNESCO, from the 5th to the 7th of February 2007. It was probably the theme of the conference, namely *The Joy of Sharing Knowledge: Looking at Ethical Challenges in the Information Age*, which inspired these academics to form the *African Network on Information Ethics (ANIE)*.

Another outcome of the conference was the formulation of a declaration of intent to which all network members subscribed. This declaration, recorded as the *Tshwane Declaration on Information Ethics in Africa, 2007*, read as follows:

An African information society should be people-centred, inclusive and development-oriented in accordance with the purposes and principles of the Charter of the United Nations, international law and multilateralism, and respecting fully and upholding the Universal Declaration of Human Rights as well as with the Declaration of Principles of the World Summit on the Information Society so that people everywhere can create, access, utilize and share information and knowledge, to achieve their full

potential and to attain the internationally agreed development goals and objectives, including the Millennium Development Goals.

In accordance with the Declaration of Principles of the World Summit on the Information Society regarding the ethical dimensions of the information society we reaffirm that African information society should respect peace and uphold the fundamental values of freedom, equality, solidarity, tolerance, shared responsibility, and respect for nature

It should be committed to promote the use and development of modern information and communication technology (ICT) in order to defeat poverty and underdevelopment.

An African information society should promote societal as well as technical ICT structures and processes in order to make knowledge sharable to all Africans. It should particularly promote the participation of all African citizens in the development of public policy in the process of constructing the African information society.

Information Ethics understood as a field of critical reflection on societal moral values and practices with regard to the production, storage, distribution and access to knowledge as well as to all kinds of societal processes, systems and media of information and communication should play a crucial role in African education and policy in order to foster social, cultural and economic development by promoting the worth and dignity of human individual and social life.

Having committed itself to ensuring that academics from Africa are represented on the global stage to participate in discussions on the ethical aspects of information communications technology, ANIE immediately started organizing international conferences and workshops on information ethics in Africa, participated in the writing and publication of articles and workbooks dealing with information ethics issues, and created its own web-site.

One of the ANIE highlights was the publication of the first online Africa Reader on Information Ethics in 2007. Another was the forming of partnerships between ANIE, UNESCO (*the United Nations Education, Scientific and Culture Organisation*), the South African National Department of Communication, and various universities across Africa, all of which

resulted from the international collaboration which typified ANIE activities led to the forming of partnerships.

A major achievement was the commitment of the South African Government, via its Department of Communications and the Presidential National Commission on Information Societies and Development, to contribute financially to ANIE activities. Being a signatory to the UNESCO and WSIS agreements it became one of the sponsors of the ANIE Information Ethics in Africa campaign as early as 2007. Other supporters included UNESCO, the Capurro-Fiek Foundation in Europe, the Universities of Pretoria and Zululand in South Africa, and the University of Wisconsin Milwaukee in the United States of America.

The successful execution of these activities could be ascribed to the commitment of ANIE participants, the efforts of the ANIE Academic Board, Executive Committee and Information Ethics Curriculum Design Committee, and the establishment of the ACEIE in 2012. The location of the centre at the University of Pretoria provided ANIE with an operational base, which enabled it to carry out its brief, namely to

- i) conduct and facilitate research on information ethics issues globally and locally
- ii) co-ordinate activities which are aimed at enhancing the awareness and knowledge of all those with a stake in and/or a role to play in the promotion of information ethics.
- iii) develop a curriculum on Information Ethics for Africa that would be piloted and eventually implemented at selected higher education institutions across Africa.

To date the centre has convened five conferences and facilitated numerous workshops on information ethics across Africa. It has, moreover, contracted a curriculum consultant briefed to develop a curriculum framework on Information Ethics for Africa. Using using conference and workshop recommendations, as well as existing research and courses on information ethics as basis, the consultant ensured that each draft of the framework was reviewed by participating academics, either at workshops or electronically. It is this curriculum framework that emerged from these deliberations that is the focus of this document.

In addition to the development of a curriculum framework the ACEIE has also to date produced a Concept Workbook and a set of Readers and has

published a number of articles on the topic of Information Ethics. All of these could be used as teaching/learning resources and should, if effectively used, not only stimulate debates on the impact that the increasing use of information communications technology has on the life world of Africa's inhabitants but also assist in the translation of existing and future research on Information Ethics into teaching and learning opportunities.

ANIE and the ACEIE would like to express our thanks to all those who participated in this curriculum development project in any way, whether through financing, advocacy, organizing of conferences and workshops, research, article writing or constructive input and feedback on various drafts of the final version. Without your contributions this framework might never have materialized.

Appendix B

ACEIE publications

Reader on Information Ethics in Africa

During the 2007 inaugural conference in Pretoria the Organising Committee decided to review selected papers by participants and to compile a book of reference on matters related to Information Ethics in Africa. This book was published on the ANIE Website as a Reader on Information Ethics in Africa (Reader). The Reader was distributed in hard copy to institutions that are involved in the design and development of the curriculum to teach Information Ethics in Africa. The Reader was compiled as a tribute to the late Mokwining Nhlapo, who as a government official was one of the visionaries for the Information Ethics project.

Information Ethics in Africa – Cross-cutting Themes

The Handbook for Information Ethics was compiled by international recognised academic role players. These acclaimed academics contributed chapters to the Handbook for Information Ethics on topics that are both practical and relevant for researchers and students in Information Ethics. The Handbook for Information Ethics is aimed at the learning and teaching environment as well as the research as post graduate fraternity. The ACEIE envisaged the inclusion of this Handbook for Information Ethics to form an important part of the learning, teaching and research activities for Information Ethics in Africa.

Concepts in Information Ethics – a Workbook

This workbook in the format of a lexicon was researched and compiled to address the need for easy reference on the use and meaning of concepts in Information Ethics. More than 65 concepts were prioritised and alphabetically listed in the workbook. This workbook is aimed at non-professional information practitioners and students who enter the field of Information Ethics.

Innovation Journal on articles related to Information Ethics in Africa

The July/August 2013 edition of the Innovation Journal was dedicated to academic articles related to Information Ethics in Africa. The Africa-focused content holds 14 peer reviewed academic articles that will form a research base for students interested in Information Ethics.

Appendix C

Glossary

Purpose and use of the glossary

The detailed glossary provided here serves a dual purpose. In the first instance it indicates the meanings attached to concepts and terms used in this document. In the second instance it provides examples of the application of the terms to topics and themes discussed in the document as a whole and the curriculum framework in particular.

The glossary is arranged in two sections. Section 1 contains explanations and applications of generic concepts. Section 2 contains explanations of the concepts as they pertain to specific topics and themes of the document.

Concepts are arranged in alphabetical order in both sections to facilitate ease of reference.

Section 1: Generic concepts and terms

Academic

Theoretical in nature, like the kind of teaching and learning typical at institutions of higher learning, universities, for example

- ❖ **Academic credits** – the weight, expressed in numbers, allocated to specific subjects, modules and/or programmes
- ❖ **Academic institution** – place where the focus of teaching and learning is on theoretical content and the development of abstract thinking
- ❖ **Academic level** – the year level (Year 1, 2, 3, et cetera) at which a particular course (module or subject) is offered
- ❖ **Academic programme** – a course of study – usually covering one or more years – leading to a qualification (certificate, diploma, degree, et cetera)
- ❖ **Academic protocol** – the agreed-upon procedures to be followed when dealing with academic matters

Access

Used as a *noun* it means entry into something – a building, property, communications technology, etc. Used as a verb it means to gain entry by using the right password, card or device required to remove any access restrictions

- ❖ **ICT application** - Access to certain kinds of information could be restricted by means of laws and/or policies. Access to information communications technology could be restricted by pass words, codes, identity numbers, voice or other access recognition methods.
- ❖ **IE application**- Arguments for open access to all information often equate restriction of access to discrimination which, in turn, could be regarded as an undermining of the *human right* to information. Accessing information one is not entitled to is unethical irrespective of whether it is information about an individual (violation of the *human right* to privacy) or about State, military or corporate affairs (*constituting a security violation*)

Accessibility

Used as a noun it refers to the ease or difficulty with which one can gain access to something (*property, information, health or social services, etc*). **Accessibility can be limited by various factors, e.g. distance, lack of transport, disability, censorship, or the availability and affordability of the means/tools needed to gain access** (*see explanation of access for more information on restrictions/limitations*)

- ❖ **ICT application**: If one does not have the information communications technology (*mobile phone, computer, internet connection, etc.*) or the skills needed to gain access to such technology accessibility is limited
- ❖ **IE application**: The more accessible information is, the easier it is for people to access it and, by implication, the more informed, or less ignorant, they will be. To ensure that the *human right* to information – also the right of those who are disabled - is not undermined, every possible step should be taken to ensure accessibility to information sources, websites included.

Accountability

A person's, organization's, State institution's or government's willingness or legal obligation to accept responsibility for the consequences of actions taken by the entity concerned and/or to answer to someone else for such. Viewed from an ethical perspective, the greater the power or the authority of the person or entity concerned, the greater the imperative for accountability should be, otherwise the trust placed in the person or entity could be eroded or completely destroyed (*also see 'Responsibility'*)

Accuracy

Correctness, without fault, without manipulation of data or information for personal or other gain - *accurate census data, election results or state or e-literacy in a country, for example*

Align/Alignment

To align is to adjust or move something to bring in line with something else, usually to ensure cohesion, coherence and appropriateness. When two or more things are therefore in alignment they are 'perfectly matched'.

- ❖ **ICT application** – The technology used in a workplace or private space is aligned to the needs of the user if it matches the purposes for which it is needed and the technological ability of the person who is using it. Think, for example, of the many ways in which ICT is 'aligned' to the needs of people with different kinds of disabilities.
- ❖ **Curriculum application** – A curriculum has to be aligned to the purpose it is to serve, the age and ability of learners for whom it is intended, and the context in which it will be implemented. Without such alignment the chances of successful implementation are minimal.
- ❖ **Teaching & learning application** – In addition to the need for curriculum alignment there should also be a close alignment between instructional methodology, learning activities and assessment if learners' academic performance is to be up to standard.

Appropriate

Suitable to the condition, circumstance or situation concerned, much like the meaning of 'alignment' as explained above

- ❖ **IE application** – if the philosophical base and/or values system used as point of departure or frame of reference in the discussion of Information Ethics is not appropriate to the target group of learners the chances of their ‘buying into’ the importance of iE and/or committing themselves to the responsible and accountable use of ICT are slim, to say the least.
- ❖ **Instructional application:** The curriculum, instructional methods and resources, as well as assessment and evaluation methods/procedures should be suitable for, or appropriate to the intended target group as well as to the instructional purpose and context concerned

Argument

A presentation or defense of a position one takes on something or a perspective from which one looks at or thinks about something.

- ❖ **Academic argument** – In an academic argument justification for the position or perspective being proposed or defended is usually theoretical or empirical (based on research evidence)
- ❖ **IE argument** – the position one takes on information ethics – i.e. whether it is necessary and/or important – is basically an academic argument therefore one’s position has to be defended with reference to IE theories and/or the results of research conducted on the impact that technology, especially ICT, has on value systems and human behaviour

Assessment

Processes aimed at gathering information (*by means of tests, examinations, or practical demonstrations*) about the extent to which learners have acquired the requisite content knowledge and skills.

Assessment could be **continuous** (i.e. occurring during the process of learning with the purpose of identifying and immediately addressing weaknesses and/or providing additional support to struggling learners), or **summative** (i.e. occurring at the end of a teaching-learning event with the purpose of determining the extent to which learners have mastered the requisite knowledge and skills).

Awareness

Knowing that something exists (*specific information, ICT or the need for information ethics, for example*)

- ❖ **IE application** – Raising awareness is only the first step in convincing ICT users of the need for information ethics. After awareness comes interest in and commitment to IE. In other words, it is not enough for IE advocates/change agents to raise awareness of the need for IE: they also have to make people curious to know more about the topic and then get them to commit to the ethical use of ICT and other sources or information.

Censorship

An act by means of which information in the public domain is officially controlled – for moral, social, ideological or political reasons – *by either deleting it from the text/source or by giving access allowing only those who satisfy specific criteria to access such information*

Challenge

An obstacle or barrier that has to be addressed or overcome in order to do something (*lack of ICT as a tool for accessing information, for example*)

- ❖ **ICT challenges** – Access and accessibility to ICT could pose a challenge if one wants to teach ICT literacy, communicate with people in other towns or countries and/or collect information available only on the Internet
- ❖ **IE challenges** – Some of the challenges that IE advocates/change agents might have to overcome in promoting the responsible use of ICT are cultural values and traditions that are not in alignment with IE values and practices.

Conflict

Opposing views or positions on specific matters or between different persons

- ❖ **IE conflicts:** Differences in/ conflict between legal and philosophical positions on information-related matters (*human **rights** versus human **responsibilities**, for example*)

Consistency

Always the same, hence predictable and reliable – consistent behaviour is a sign of a well-adjusted person, for example

Discipline

A well established field of study (*Physics, or Philosophy, for example*) which focuses primarily on the acquisition and critical understanding of theoretical knowledge and cognitive skills

- ❖ ***Applied discipline*** – a field of study which is based on, derived from or closely related to a particular discipline (Information Ethics, which has a philosophical base is a good example) but also serves a more practical purpose – career preparation of technical skills, for example
- ❖ ***Cross-disciplinary programme/course*** – an educational offering which derives its content from more than one discipline

Dissemination (of information)

- ❖ Releasing or sharing available information – *on Information Ethics, or the proposed IE curriculum model, for example*

Distinctive

- ❖ A characteristic that helps one distinguish one thing from another – a *mobile phone* from a *landline*, or a *desktop* computer from a *laptop* and/or an *electronic notebook*, for example)

Enablement/Empowerment

- ❖ An action that makes it possible for someone to do something - *training* someone in the use of a computer or a mobile phone, and/or *establishing* a structure and procedures for the implementation of a curriculum or new programme, for example

Evaluation

Passing judgment on the value, worth, quality or standard something or someone, usually with reference to some or other pre-determined criterion, norm or standard

- ❖ **ICT application:** Judging/evaluating ICT equipment in terms of its relevance, quality, accessibility or appropriateness
- ❖ **IE application:** Judging whether or not a person is behaving responsibly by comparing his/her behaviour with the ethical principles on which IE is based
- ❖ **Curriculum application:** *Judging the appropriateness of a curriculum in terms of target group, context, available resources, et cetera (see **Curriculum Evaluation** for more information)*
- ❖ **Instructional application** - The process by means of which the results of assessment are measured **against the predetermined standards** set for a particular course or grade level, and is aimed at determining whether or not learners have done well enough to proceed to a higher level or grade. Evaluation is primarily **summative** in nature and typically takes place at culminating points of an instructional event (see **Assessment** for more information)

Evolution

Gradual development rather than sudden or radical change – *e.g. the evolution of ICT versus the violent overthrow of governments or radical changes to education systems and curricula, for example*

Globalization

The inter-connectedness of countries in terms of commerce, trade, education and value systems - *reflected in the existence of bodies like the United Nations, the World Economic Forum, NEPAD and others*

Impact

The effect or influence that one or more things or processes have on something else

- ❖ **ICT application** – The way in which ICT has, for example, changed the way people communicate with one another
- ❖ **IE application** - The influence/effect that ICT and globalization have had on different value systems, for example

Implicit

Implied or suggested rather than directly, or explicitly stated – *in advocating the need for responsible use of ICT a person would implicitly be promoting values and moral behaviour*

Model

A representation or image of an actual phenomenon or physical structure indicating/illustrating what the real thing might look like, and allowing the person whose model it is to identify possible weaknesses or problems prior to the start of the actual activity - *Civil engineers* typically build models - of bridges, for example - before actually building the bridge, for example

- ❖ **Curriculum application** - Curriculum designers typically draw graphic representations of the kind of curriculum they want to develop before finally deciding on the actual content, methodologies and resources

Narration

The telling of a story or experience, either in writing or orally

- ❖ **IE application:** Telling others about one's own experiences in the use or misuse of ICT and other sources of information

Premise

Point of departure for, basis of, or assumption on which a point of view or argument rests

- ❖ **IE application:** The need for an IE programme rests on (is premised on) the assumption that ICT is being misused for illegal and/or immoral purposes

Prerogative

The right to choose or decide – for example, the choice of a research topic is the prerogative of the student and his/her study leader

Programme

A series of scenes of events - an awareness programme, for example – or a course of study

- ❖ **Academic programme** – a course of study – usually covering one or more years – leading to a qualification (certificate, diploma, degree, et cetera)
- ❖ **Coursework programme**– an academic/university programme that requires students to attend lectures in one or more subjects or modules: a Coursework Masters’, for example, requires students to attend classes on subjects related to there are of interest before they start their research projects.
- ❖ **Mainstreamed programme** – the kind of programme that is offered in all institutions of the same kind, universities, for example
- ❖ **Post-graduate academic programme** – academic studies that take place after a person has already obtained a first degree in the same field
- ❖ **Research programme** – a programme in which students are taught what research is, when and why research is necessary and how to about collecting, recording and interpreting research data
- ❖ **Stand-alone unit/module** – a unit or module that does not form part of a bigger programme and has its own outcomes, content and credits
- ❖ **Under-graduate academic programme/offering** – programmes of study at an academic institution leading up to, or culminating in, a first degree
- ❖ **University programme/offering** – subject, module, programme and/ or short course offered at a university

Promote

To spread the word, or ‘market’ a product, idea, programme, activity – *to promote awareness of the need for information ethics in Africa and the rest of the world, for example*

Public DOMAIN

The area in which the broad spectrum of society operates, irrespective of the status or wealth of the people concerned – *debates on what constitutes cyber crime should take place in the public domain, for example*

Purpose-Focused

Every decision and action taken is aimed at achieving a specific, pre-determined purpose or goal

- ❖ **IE application** – The ACEIE wanted to **raise awareness** of the need for ethical behaviour in the use of ICT in Africa. To achieve **this purpose** the centre hosted a number of conferences and seminars in a number of African countries

Research

Reading up on or collecting evidence on something to test its validity, truth value or the extent to which it is regarded as such or, alternatively, to find answers to important questions or solutions to problems

- ❖ **Guided research** - Research in which the student researchers is actively guided and supported by his/her supervisor/study leader in choosing a research topic and in other aspects related to the research project concerned. Research in which someone or some group is contracted to do research on behalf of some or other organization or department could also be regarded as guided research since the brief is determined by the contractor, not the contracted researcher/s.
- ❖ **Independent research** – The student, or other researcher, without interference from any other party, decides on the topic, type of research to be conducted and research procedures to be followed.
- ❖ **Research programme** – a programme in which students are taught what research is, when and why research is necessary and how to do about collecting, recording and interpreting research data

Responsibility

Doing things as expected of one and being willing to accept the consequences of one's actions and/or decisions (*also see 'Accountability'*)

Review

Reconsidering, or taking another look at something with a view to better understanding or the possible need for change

- ❖ **Curriculum review** – Looking at a curriculum – design or implementation – again to determine whether or not there is a need for change and, if so, to in which areas

- ❖ **Literature review** – A purpose-focused reading of literature (*usually for research purposes*) on a specific topic

Transparency

Open, freely accessible, without any attempt being made to hide information from others - *e.g. allowing the public to view government documents or to attend high profile court cases*

Support

To provide help and assistance when and where it is needed – *helping someone build a house, acquire e-skill, prepare for a test or examination, or disseminate information on specific matters like information ethics, for example*

Undermine

The opposite of support, in other words, deliberately trying to stop something from happening – *e.g. undermining attempts to stop the misuse of ICT for pornographic or surveillance purposes*

Section 2: Topic-related concepts and jargon

Information and information communications technology

Character assassination

Using ICT to spread lies or negative rumours about a person or persons with the purpose of destroying his/her reputation – *rumours that a person is abusing drugs, or viewing pornography when this is not true.*

Converging technologies

Technologies that have come together in a single device, e.g. a cell phone which incorporates Internet, a camera, a GPS and various other applications

Cyber bullying

Using mobile devices to threaten or instill fear in other users – *suggesting, for example, that something terrible will happen to a person if s/he does not pass on a certain e-mail message or, alternatively, if s/he tells others about the information that was sent to her/him*

Cyber crime

The use of ICT for activities that are against the law – *child pornography, espionage, terrorism, financial fraud, distribution of computer viruses, for example*

Digital divide

The gap between the information rich (*those who have open and/or free access to ICT and electronic information systems*) and the information poor (*those with limited access or accessibility to ICT and electronic information systems*)

E-governance

The use of ICT by governments to improve service delivery and/or communicate with the public and private sectors

E-learning

The use of ICT for educational purposes – *learning via distance education, home schooling, or in formal educational institutions, for example*

E-literacy

The ability to use ICT for different purposes – *for learning, communication, information-gathering, et cetera*

Hacking

Gaining illegal access to restricted websites sites, irrespective of the reasons for doing so

Information

Meaningfully organized or structured data

Information Age

An age like the current one in which the generation, dissemination and use of information play a central role in the broad spectrum of human affair, with access to such information determining the success or not of a range of human endeavours

Information communications technology (ICT)

Technologies that provide access to information by via telecommunications media - Internet, wireless networks, cell phones, satellite technology, for example

Information Ethics

Information Ethics, a field of study which focuses specifically on the use and misuse of information as moral/ethical issues field of study, could be regarded as a branch of Applied Ethics – a discipline that deals with the difference between morality, immorality and amorality.

Information and Knowledge Society

A society in which physical, mental, social and economic survival depend on the generation, processing, and free flow of knowledge and information, all of which is made possible by well established, functioning information communications technology systems and structures

Information Life cycle

A description of the processes required to transform raw data into reliable and usable information (*see **Concept Workbook** for a detailed description of the six stages which, together, make up the information life cycle*)

Information networks

A network devoted to the generation, recording and sharing of information – sometimes generic, sometimes specific - for example e-billing, e-property transactions, e-commerce, e-governance, Skype, Twitter, Tweet, Face-book profiles, and Internet

Information Poverty

People suffer from information poverty when they do not have either access to or the means of accessing the information they need to to improve the quality of their lives and/or to function effectively in a range of situations and contexts

Information technology practitioners

People who need and use information technology for work purposes

Information technology professionals

People who are trained in the creation, use and repair of information technology devices and networks

Surfing the net

Gathering information on specific matters from the world-wide web or specific web-sites

Surveillance

Using ICT to collect private/personal information for monitoring and security purposes

Morality and Information Ethics

Culture and tradition

In its most basic sense ‘*culture*’ refers to the way things are done in a particular group, community or nation – a work culture, African culture, etc. If the specific culture has over many ways become the characteristic way of living or a particular people, or if was the culture of this group in past times, it is referred to as ‘*tradition*’ (also see ‘*Values and Value systems*’)

Ethical conduct

Behaviour that is in line with the value system or the person/persons concerned, for example, not stealing another’s possessions, not because it is against the law but because it is against one’s religious or spiritual beliefs. What may be regarded as ethical by one person or group may well be regarded as unethical in another.

Ethical decision-making

Making decisions based on or in adherence to moral principles

Ethical reasoning

Arguing a point based on one’s knowledge and understanding of morality, moral issues and dilemmas

Ethical reasoning techniques

Techniques used in debating or discussing ethical/moral issues, problems and/or dilemmas , e.g. the MOVE technique described in the Information Ethics Concept Book

Ethics

A field of study devoted to the exploration of morality (*value orientations, moral issues and dilemmas*)

Ethos

Personal or group value system or code of conduct, irrespective of its being formally written down or not

Fairness

To treat all persons justly and/or equally; to apply the same rules and punishment to all concerned in the same situation and/or context

Human rights

Rights that can by law, usually a Constitution or Bill of Rights, that be claimed by all human beings, e.g. the right to life, the right to freedom of speech, et cetera

Information ethics

A branch of field of study, Applied Ethics, focusing specifically on the use and misuse of information and ICT as moral/ethical issues

Information ethics issues

Attitudes, beliefs and/or behaviour that ignore, promote or support the misuse and/or abuse of information and information communications technology in the private or public sphere for whatever reason/purpose

Information ethics offerings

Umbrella term covering the full spectrum of programmes, subjects, modules, units or short courses dealing with information ethics politics, issues and theories

Moral dilemma

A situation where the person concerned has to make a choice between two or more sets of personal values in order to solve some or other problem. Irrespective of the choice made the person will have to sacrifice one value for the other, thus making him/her feel guilty about what s/he decided. The person concerned might know that his brother is illegally accessing child pornography on the web (i.e. committing a crime) but because he loves his brother and is loyal to his family he is reluctant to report his brother's crime to the relevant authorities. Does this now make him an accessory to the crime or, at least, an immoral person? That is the dilemma.

Moral imperative

That which one is compelled to do because one's values/morals demand it

Morals & morality

Morals are the same as values, *morality* a way of living according to one's values/morals. A person who behaves *immorally* is a person whose values are regarded by others as not moral whereas an *amoral* person is someone who subscribes to no particular values but typically adjusts his/her morality to the situation or circumstances in which he finds himself at any particular moment.

Moral versus responsible

One's behaviour is regarded as *moral* when it is in line with the *values* to which one subscribes; one's behaviour is *responsible* when it is such that the *consequences* of such behaviour will not negatively affect either the person whose behaviour is in question or anyone else.

Normative aspects

Those aspects of behaviour or thinking that is regarded as the *norm* (i.e. *the acceptable way of doing* something) in a particular culture, institution or workplace. If, for example, the copying of published texts for learning purposes is regarded as an acceptable practice no one will be accused of plagiarism whereas if it is not the norm such practices could result in law suits.

Values & values systems

A value is something that one holds dear and which has an influence on one's decisions or actions.

A value system is a set of values that serves as a frame of reference for the behaviour of the group or groups of people who developed and/or agreed to accept it as their own.

Cognitive development

Knowledge

The ability to **recognize** or **identify** something based on past learning or experience, i.e. to be aware of something – a problem, a new method or device, corruption, the need for information ethics, et cetera

Comprehension/Understanding

The ability to **explain** (*in one's own words*), without judging or interpretation, what one *knows* about particular topic, problem, issue, method, device, field of study, et cetera

Application

The ability to **use/apply** one's *knowledge and understanding* of a topic, innovation, movement, field of study **for different purpose** – e.g. to teach others what one knows and understands, to stimulate and/or take part in debates on the knowledge area concerned, to solve a problem using acquired knowledge and understanding of the topic, to create or build something related to the knowledge area concerned

Analysis

The ability to **compare** (i.e. to identify similarities and differences between things) or to **deconstruct** (something into its component parts) in order to find out *how* it works, *why* it works the way it does, and *how* it could affect other things with which it comes into contact. One could analyze (i.e. compare or deconstruct) theories, arguments, equipment, curricula, lessons, value systems, human attitudes and behaviour, political manifestos, development plans or initiatives, processes and procedures, et cetera. A crucial element of analysis is therefore the ability to *identify relationships/*

links - between different parts/elements of the same thing as well as those of different things.

Synthesize

The ability to *use one's knowledge and understanding of relationships to create something different* – either an *improved version* of the thing (theory, lesson, device, argument, curriculum, etc.) which one deconstructed or one could use the knowledge and understanding gained by deconstructing it to create something entirely new/different.

Evaluation

The ability to *use everything one knows and understands* about a particular thing (topic, argument, theory, system, piece of equipment, process) to **judge** its quality, worth, usefulness, etc.

No Judgment should be based on one's personal feelings, preferences or experiences; rather, it should be **critterion-referenced**. In getting to know everything about the thing concerned (*through identification, explanation and application*), by comparing it to other things of the same kind (*analysis*), and by trying to create something like it (*synthesis*) one is able to formulate criteria against which the quality, worth or usefulness of the thing being evaluated can be assessed. Valid evaluations/judgments are always based on the results of one or more criterion-referenced assessment exercises.

Curriculum

Curriculum

A *document* which describes a particular *course of study* (*Information Ethics*, in this case) indicating the content that should be covered, the sequence in which content should be covered, the instructional methods and resources that could be used to do so, the outcomes (end results) that have to be achieved and the assessment protocol that could be used to determine whether or not the learners satisfied the required academic standards.

Since the identified target group and the context in which the curriculum will be implemented determines the appropriateness of the content, instructional methods, resources and academic standards the ideal is that it should be designed by the persons who are going to be responsible for its implementation

Curriculum Design

The term is used to describe both the **process** involved in creating the curriculum and the **structure** of the curriculum (i.e. the way in which it is put together).

Curriculum delivery

The process by means of which the curriculum changes from being a document to being a *practice* – **teaching, learning, and assessing** – aimed at ensuring that the aims and standards stipulated in the curriculum document will be achieved.

Curriculum development

An umbrella term that incorporates all the activities needed to design, implement and evaluate a curriculum but also activities that precede or follow these, namely the gathering of information before, during and after curriculum design and delivery, the piloting of the curriculum prior to implementation, and a range of other activities aimed at assuring and monitoring quality throughout.

Curriculum evaluation

A term used to refer to activities aimed at ensuring that the curriculum is appropriate to the target group and instructional context concerned. Such activities could include a review of the curriculum design, piloting of the curriculum prior to implementation and possible adjustments to the design as a consequence; continual monitoring of curriculum delivery, and even the retraction and redesign of the curriculum if required.

Evaluation could be either *illustrative* (i.e. aimed at the identification of strengths and weaknesses with a view to correct the latter and further strengthen the former) or *summative* (i.e. aimed at determining whether or not the curriculum (a) achieves the purpose it was intended to, and/or (b) is being implemented as it should be).

Curriculum framework

A document that indicates in generic terms the purpose, focus, outcomes, content, and instructional approaches for curricula in a particular field of study. Since the framework is not contextualized – i.e. does not target

a specific group of people learning the content in a particular context it cannot simply be implemented as is – it can only be used as a point of departure for the design of appropriate context-specific curricula.

Curriculum implementation

An umbrella term encompassing all the activities required for the effective and efficient delivery of the curriculum. Activities that have to take place before curriculum delivery include the creation and/or establishment of curriculum management structures and procedures; the development of appropriate curriculum resources/materials, and the training of teachers/lecturers who are going to be responsible for the delivery of the curriculum. Following these activities are those detailed under **curriculum delivery** and **curriculum evaluation**.

Teaching and learning

Assessment

Refers to processes aimed at gathering information (*by means of tests, examinations, or practical demonstrations*) about the extent to which learners have acquired the requisite content knowledge and skills. Assessment could be **continuous** (i.e. occurring during the process of learning with the purpose of identifying and immediately addressing weaknesses and/or providing additional support to struggling learners), or **summative** (i.e. occurring at the end of a teaching-learning event with the purpose of determining the extent to which learners have mastered the requisite knowledge and skills) (Also see '**Evaluation**' below).

Brainstorming

A learning technique in which participants are given the opportunity to “think out loud” about the topic, problem or issue being discussed, with one of the participants acting as scribe, taking notes for subsequent discussions

Conceptual and contextual knowledge

Conceptual knowledge is knowledge of concepts, ideas, or theories whereas **contextual knowledge** refers to knowledge of places, situations or circumstances. One could also argue that the former – conceptual

knowledge – is typical of ‘book learning’ whereas the latter –‘contextual knowledge – is acquired through real life or work experience.

Education and training

The term, ‘education’ is typically used to describe processes aimed at the holistic development of learners and is associated with learning in formal education institutions like school, colleges and universities.

Training, on the other hand, is associated with skills development and is typically used to refer to the kind of learning that takes place in the work environment or workshops.

Education/training provider

The institution or organization that is responsible for ensuring that training takes place.

Evaluation

Refers to the process by means of which the results of assessment are measured ***against the predetermined standards*** set for a particular course or grade level, and is aimed at determining whether or not learners have done well enough to proceed to a higher level or grade. Evaluation is primarily ***summative*** in nature and typically takes place at culminating points of an instructional event (Also see ***Assessment*** earlier on).

Indigenous knowledge

The term, ‘*indigenous knowledge*’, is used to refer to knowledge associated with a particular culture or people (Africans, Asians, Europeans, for example), represents a particular perspective, is believed to have developed over years, and distinguishes the way in which the people concerned views and approaches knowledge and knowledge-related matter.

Instructional/ teaching methodologies

The techniques or approaches used to ensure that learners understand the learning content and/or acquire the skills concerned.

Learners and students

The term, '**learners**' is an umbrella term used to refer to all those who attend education or training sessions on information ethics, irrespective of whether this is at an educational institution, in the workplace or at a public forum. The term, 'students' is used to refer to a specific group of learners, namely those at universities and other higher education institutions

Learning Content

An umbrella term used to refer to everything that has to be learnt, i.e. theoretical knowledge, practical skills, values and attitudes

Lecturer/ facilitator

The terms are interchangeable although the term, 'lecturer' is typically used to refer to those attached to an educational institution whereas the term, 'facilitator' is most often used in the training context, where workshops rather than formal lectures are the norm.

Mastery

A person is said to have 'mastered' the content if s/he has acquired the requisite knowledge and skills and is able to demonstrate her/his competence in a manner (**written, oral, practical or portfolio**) determined by the institution or organization concerned.

Moderation

A process by means of which someone *other than the original assessor* reviews the marking of scripts and/or the marks allocated to learners with a view to determining its *fairness, reliability and validity*.

Portfolio of evidence

A portfolio of evidence is essentially a file/folder with evidence of a learner's knowledge, understanding and/or expertise in a particular area. Typically used in the assessment and evaluation of work-related learning (i.e. in the training sector) it has lately become a popular means of assessing learner achievement in educational institutions.

Themes

Focus areas within a particular topic or subject. In Information Ethics, for example, the topic, '*Use and misuse of ICT*', could focus on themes like *e-governance* or *cyber crime*, for example.

Cognitive & practical skills

The ability to *think and/or reason* is regarded as a *cognitive skill*; the ability to *use/apply* one's knowledge and understanding to do something physical is regarded as a *practical skill*. Knowledge of the way a computer works could, for example, be regarded as a cognitive skill but the ability to use this knowledge and understanding to fix the computer when it is broken would be a practical skills.

Multi-disciplinary teams

A group of academics from different disciplines who come together for a specific purpose, e.g. to offer a multi-disciplinary programme like Information Ethics ***Perspective***

A point of view, the angle from which one looks at or discusses something: one could, for example, discuss information ethics from a legal or a philosophical perspective.

Appendix D

Tabulated summary of existing undergraduate Information Ethics curriculum offerings

University	Department	Programme	Structure	Content	Levels	Credits
Tennessee	Communications	Mass communications law & ethics		Electronic media (including libel), privacy, copyright, free press, free trial, government regulations of advertising, electronic media & public relations	UG	3
	Business	Business ethics	Module	Meaning & value of work, employee rights 7 responsibilities, marketing, finance, the environment, information technology, diversity & discrimination, international business, economic globalization, ethical business culture	UG	3
	Philosophy	Applied ethics		Not indicated	UG	3
	Law/Politics	Constitutional issues		Integrates law, policy & ethics in communication information	Graduate	3
Zululand	Department of Information Studies	Info Science & literacy	Integrated units	Current issues	L1	1 – 4
		Information ethics & Infopreneurship	Half semester	Legal issues – intellectual property, copyright, industrial property, licensing, contractual rights, plagiarism	L3	8
		Information ethics	Semester	Information policy Internet/cyber ethics Protection – copyright, censorship, surveillance, privacy	L4	16
		Research methodology	Integrated units	Plagiarism	L3	
		Information literacy	Integrated units	Access – rights/freedom (expression + access), digital divide, open access,	L2	
		Intro to info science & information literacy	Integrated	Introduction: purpose, history, theory of ethics & information ethics	L1	

<i>University</i>	<i>Department</i>	<i>Programme</i>	<i>Structure</i>	<i>Content</i>	<i>Levels</i>	<i>Credits</i>
		Information ethics	Semester modules	Introduction to information & computer ethics Privacy issues in information & computer ethics Information & computer ethics & accuracy of information Information & computer ethics & intellectual property Ethical issues involving security Information & computer ethics & access to information Importance of Declaration of Human Rights, SA Constitution & various laws & legislations underlying & facilitating the practical implementation of information ethics issues highlighted throughout the module	L2	20
Pretoria	Dept of information science	Socio-political aspects of info in global context	Integrated in INL course	Ethical issues of access i.t.o. information poverty & the digital divide Privacy – privacy & the right to information; the Data Protection Bill Accuracy – ethical issues concerning digital identity management Access – ethical dilemmas associated with WikiLeaks The Consumer Protection Act Information Philosophy Information Poverty Security – Information & cyber warfare Ethical & technical issues concerning information security	L3	
				Intellectual freedom Censorship Copyright Plagiarism	PG (Hons)	15
Zambia	School of Education	Library & Information Studies	Components of existing course	Concept & philosophy of Information Science ethics Tools of info ethics – professional register & code of ethics Ethical implications of the librarian's creed Dilemmas in information ethics fields Intellectual property Information access & professional ethics Computer ethics	1 - L4	Course
Uganda	BLIS [Business library information services??]	Library & information science ethics Legal & ethical issues	Course			4

University	Department	Programme	Structure	Content	Levels	Credits
Ghana	Information studies	Research methods Information in society Introduction to technology Copyright & censorship	Integrated into different subjects	Referencing Plagiarism Access Copyright Censorship Digital divide		Course
	Communication studies	Media ethics				
	Faculty of law	Intellectual property				
Botswana	Library & information studies		Short courses	Legal aspects of information Computer ethics Business ethics Professional ethics Moral ethics Information security		3 (42hrs)
	Computer science					
	Law	Ibid				
	Business					
	Theology & religious studies					
Bulawayo	Journalism & media studies	Media ethics	Units within modules	Ethics & law Objectivity, fairness, balance, accuracy, protection of source, codes of conduct, self-regulation, ownership, editorial policy Ethical provision of information services Authentic sources of information Social functions of libraries, archives & other information centres National information policy, legal frameworks, major contemporary issues, etc. Concept & philosophy of information ethics Ranganathan's & Gorman's laws of Information Science Basic tools of information ethics – professional register & code of ethics Implication of Librarian's creed to information ethics Problematical ethical situations Normative ethical frameworks		Course
	Library & information science	Information sources & services				
		Information & society				
		Legal & professional issues				
Library & information science	Information ethics & policy Information science	Subject			4	
Makerere	Library & information science					

Appendix E

Structure of existing undergraduate Information Ethics curriculum offerings in the RSA

UNIVERSITY OF PRETORIA

FACULTY, SCHOOL & DEPARTMENT	COURSE CODE & TITLE	LEARNING OBJECTIVES	THEMES & CONTENT
Faculty of Engineering, Built Environment & Information Technology School of Information Technology Department of Information Science	INL 240 Information Science: Social and ethical impact (Information and computer ethics	Understand the concepts of ethics, information ethics & computer ethics Be able to discuss various ethical theories Be able to identify & describe the importance of computer & information ethics Understand the behavioural principles underlying information & computer ethics	<p>Theme 1 Introduction to information & computer ethics</p> <p>Content Introduction to the concept of ethics Foundations & development of information ethics Information ethics as applied ethics Information ethics as normative ethics Uniqueness of computer ethics Approaches to computer ethics Information ethics as the foundation of computer ethics Technology & ethical behaviour</p>
	Understand what law is Understand various concepts within the legal system Be able to identify important legislation in the SA Constitution Understand how tensions may arise between laws & ethical standards		<p>Theme 2 Ethic & the Law</p> <p>Content What is the law? The effects of jurisdiction Understand concepts behind law The SA Constitution Tensions between ethics & law Understanding the importance of ethical & legal knowledge (Plus: specific legislation pertaining to issues covered in this theme)</p>

<p>Theme 3 Privacy issues in information & computer ethics</p> <p>Content What is privacy/ The concept of privacy Why information privacy is an issue Kinds of privacy Ethics & private information The impact of technology on privacy -The scale of information gathering -the kind of information gathered -the scale of exchange of information (Plus: <i>specific legislation pertaining to issues covered in this theme</i>)</p>	<p>Be able to define the concept privacy Be knowledgeable on ethical issues surrounding information privacy Be able to indicate in which manner information technology has influenced the right to privacy</p>	
<p>Theme 4 Information ethics & accuracy of information</p> <p>Content Authenticity, fidelity & accuracy of information Incorrect or missing data Accuracy & trust Accountability for errors in information Unintentional inaccurate data Intentional falsification of data Digital identity & identity theft (Plus: <i>specific legislation pertaining to issues covered in this theme</i>)</p>	<p>Aware of role & importance of accurate information Discuss the issue of accountability 7 responsibility for incorrect information Know about types of inaccurate or incorrect information – both intentional & unintentional Discuss the issues surrounding digital identity, identity theft & digital identity management</p>	

		<p>Understand the concepts intellectual property & intellectual property rights Discuss the origins of these concepts & the practical issues surrounding these rights Understand software ownership & legislation pertaining to this Discuss software piracy, online file sharing & plagiarism Describe & discuss the impact of social media on intellectual property rights</p>	<p>Theme 5 Information ethics & intellectual property Content What are intellectual property & property rights? Philosophical basis of property -Origins of material rights -Material rights & intellectual property -Intellectual property & technology Understanding software ownership Current legal protection -trade secrecy laws -Patent protection Software piracy Online file sharing & other similar issues Plagiarism Intellectual property & social networking <i>(Plus: specific legislation pertaining to issues covered in this theme)</i></p>
	<p>Discuss the many issues surrounding security Distinguish the paradigms of information security Understand the application areas of information security Understand the changing information security culture</p>	<p>Theme 6 Ethical issues involving security Content Introduction to information security Application areas Paradigms of information security Security technologies -encryption -penetration testing -further prevention strategies Privacy vs security <i>(Plus: specific legislation pertaining to issues covered in this theme)</i></p>	

		<p>Discuss the various issues concerning computer ethics & access</p> <p>Discuss the main reasons for information poverty & the so-called digital divide</p> <p>Understand the social implications & social values of the use of IT</p> <p>Discuss the issues around censorship in relation to access to information</p> <p>Be aware of privacy issues regarding access to information</p>	<p>Theme 7 Information ethics & access to information</p> <p>Content</p> <p>Technology & social change</p> <ul style="list-style-type: none"> -the so-called digital divide -the Internet as democratic medium -the preservation of information & access to information <p>Information poverty</p> <ul style="list-style-type: none"> -what is information poverty? -main reasons for information poverty -Possible solutions to the problem of information poverty -Moral reflection on information poverty <p>Other issues</p> <ul style="list-style-type: none"> -free 7 open source software -censorship & access to information & expression -access & privacy -general -access & decision-making <p><i>(Plus: specific legislation pertaining to issues covered in this theme)</i></p>
	<p>Discuss the many (new) ethical issues surrounding free & open source software</p> <p>Understand moral responsibility of Internet service providers</p> <p>Understand current legal discourse surrounding Internet service providers</p> <p>Discuss various views regarding information ethics in different cultures</p>	<p>Theme 8 Other issues around ethics & the Internet</p> <p>Content</p> <p>Moral responsibility of Internet service providers</p> <ul style="list-style-type: none"> -what is responsibility? -regulation & governance of Internet -Policy issues -Code of ethics Information ethics & cultures -information ethics in Africa -intercultural issues & information ethics 	

UNIVERSITY OF ZULULAND

<i>FACULTY, SCHOOL & DEPARTMENT</i>	<i>COURSE CODE & TITLE</i>	<i>AIM</i>
Department of library & information Science	AINF312 Information ethics & infoprneurship	To equip students with knowledge of the legal & ethical issues concerning information services & sensitize them to the need for observing legal & ethical requirements in information management & services
<i>LEARNING OBJECTIVES</i>		<i>THEMES & CONTENT</i>
<p>Create understanding of the concepts & theories of information ethics & infoprneurship</p> <p>Provide insight into the ethical dilemma affecting information service & discuss how they can be handled</p> <p>Create awareness & understanding of the intellectual property issues & challenges affecting information services</p> <p>Discuss & understand issues 7 challenges of Internet & cyber ethics</p> <p>Debate & understand the concepts of accessibility & protection of information</p> <p>Examine the current issues & challenges of information ethics including those related to IE education in Africa</p>		<p>Part/Theme One - Information Ethics Content</p> <p>Week 1 -Understanding laws, ethics & mores as social phenomena -Understanding ethical theories</p> <p>Week 2 -Information policy & legislations in South Africa -understanding ethical dilemma for information services</p> <p>Week 3 Conceptions of intellectual property & copyright</p> <p>Week 4 Industrial property & contractual rights</p> <p>Week 5 -internet ethics & cyber ethics -e-government ethics</p> <p>Week 6 Accessibility (freedom of access/information/ expression (UNDHR & SA Bill of Rights_ versus protection (censorship, surveillance, privacy, security, etc)</p> <p>Week 7 Evaluation fo current issues & challenges</p> <p>Part/Theme 2 - Inforpreneurship Content</p> <p>Week 8 Conceptions of economics of information, information sector & inforpreneurship</p> <p>Week 9 Inforpreneurship</p> <p>Week 10 Understanding the value of information</p> <p>Week 11 Costing information products & services</p> <p>Week 12 Pricing information products & services</p>

Appendix F

Current post-graduate curriculum offerings on Information Ethics in the RSA

UNIVERSITY OF PRETORIA

<i>UNIVERSITY</i>	<i>DEPARTMENT</i>	<i>PROGRAMME</i>	<i>STRUCTURE</i>	<i>CONTENT</i>
<i>Pretoria</i>	Dept of information science	Information ethics	Semester modules	Privacy – privacy & the right to information; the Data Protection Bill Accuracy – ethical issues concerning digital identity management Access – ethical dilemmas associated with WikiLeaks The Consumer Protection Act Information Philosophy Information Poverty Security – Information & cyber warfare Ethical & technical issues concerning information security
		Socio-political aspects of information in a global context	Integrated in INL course	Ethical issues of access i.t.o. information poverty & the digital divide

UNIVERSITY OF ZULULAND

<i>FACULTY, SCHOOL & DEPARTMENT</i>	<i>COURSE CODE & TITLE</i>	<i>AIM</i>
Department of library & information Science	AINF412 Information ethics	To equip students with knowledge of the legal & ethical issues concerning information services & sensitize them to the need for observing legal & ethical requirements in information management & services
<i>LEARNING OBJECTIVES</i>	<i>THEMES & CONTENT</i>	
<p>Create understanding of the concepts & theories of information ethics</p> <p>Provide insight into the ethical dilemma affecting information service & discuss how they can be handled</p> <p>Create awareness & understanding of the intellectual property issues & challenges affecting information services</p> <p>Discuss & understand issues & challenges of Internet & cyber ethics</p> <p>Debate & understand the concepts of accessibility & protection of information</p> <p>Examine the current issues & challenges of information ethics including those related to IE education in Africa</p>	<p>Part/Theme One Information Ethics</p> <p>Week 1 -Understanding laws, ethics & mores as social phenomena</p> <p>Week 2 -Understanding ethical theories</p> <p>Week 3- Information policy & legislations in South Africa</p> <p>Week 4- understanding ethical dilemma for information services</p> <p>Week 5- Intellectual property</p> <p>Week 6- Copyright</p> <p>Week 7-Industrial property</p> <p>Week 8-Contractual rights</p> <p>Week 9-internet ethics & cyber ethics</p> <p>Week 10-E-government ethics</p> <p>Week 11-Accessibility (freedom of access/ information/ expression (UNDHR & SA Bill of Rights_ versus protection (censorship, surveillance, privacy, security, etc)</p> <p>Week 12-Evaluation of current issues & challenges</p> <p>Part/Theme 2 Infopreneurship</p> <p>Week 8- Conceptions of economics of information, information sector & infopreneurship</p> <p>Week 9-Infopreneurship</p> <p>Week 10-Understanding the value of information</p> <p>Week 11-Costing information products & services</p> <p>Week 12-Pricing information products & services</p>	

Appendix G

List of curriculum development participants (individuals and institutions)

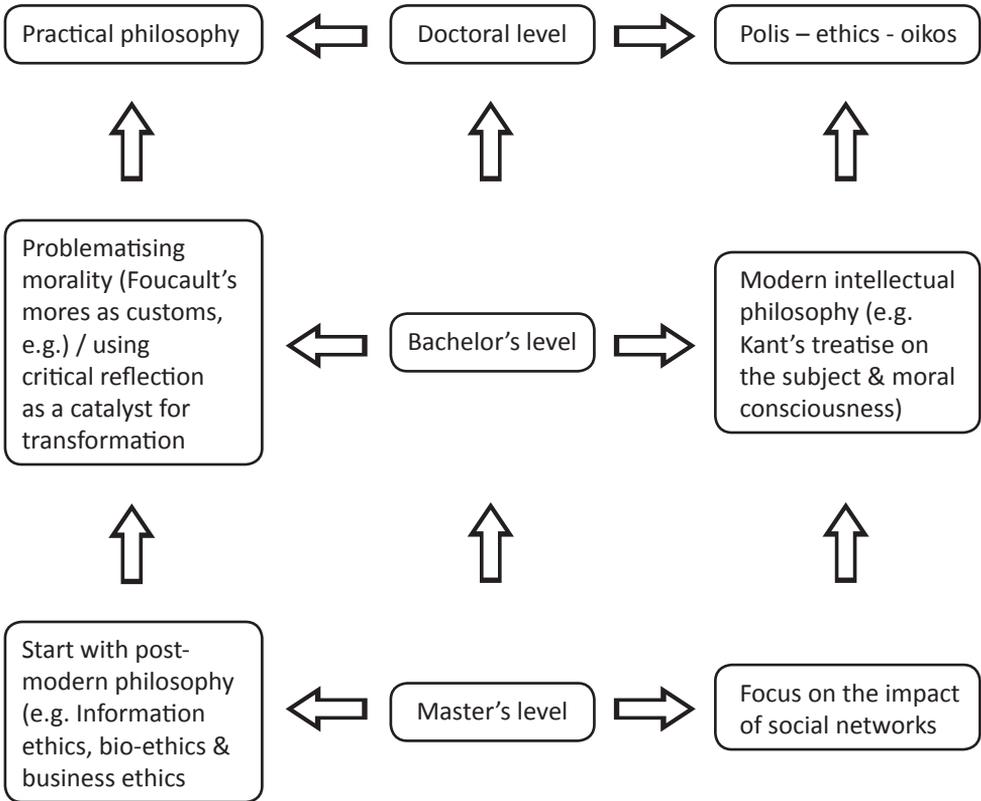
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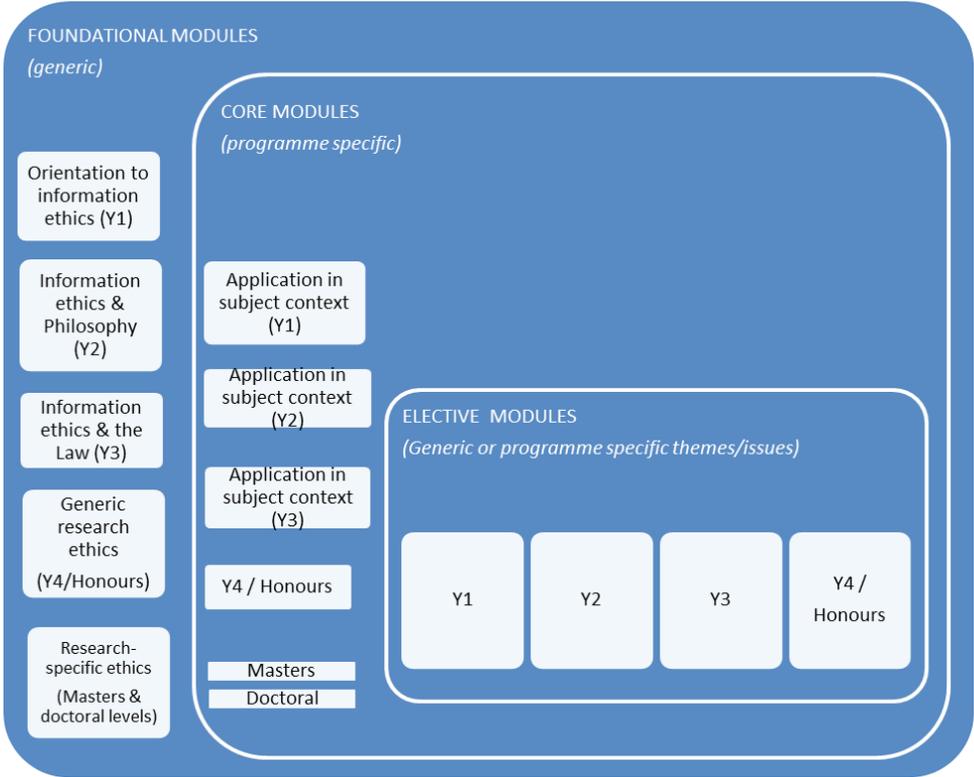
Appendix H

Exemplars of proposed curriculum models

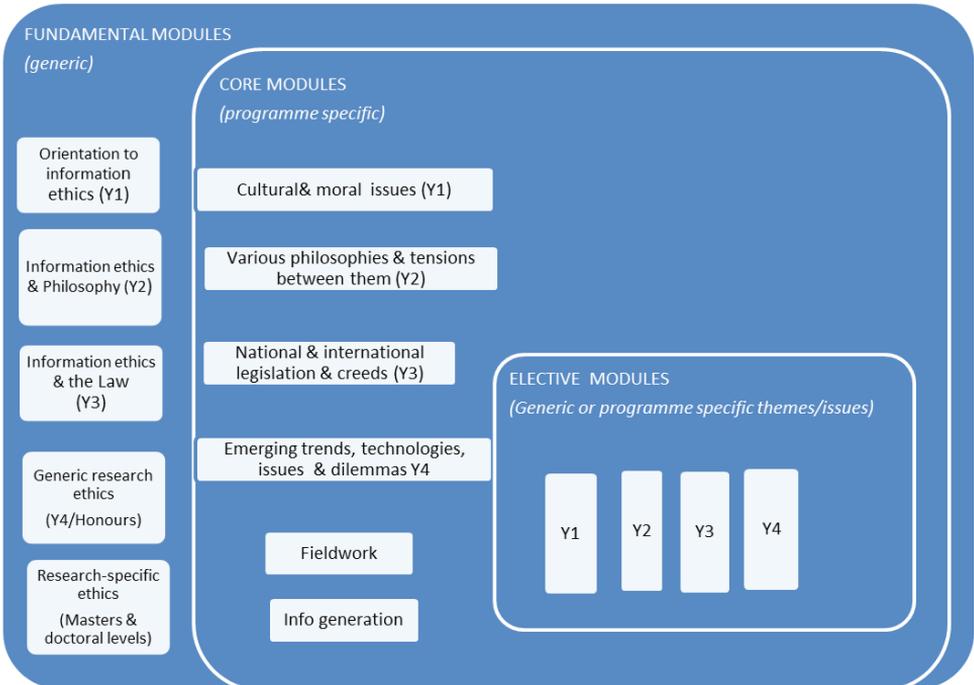
Exemplar 1: Proposed Conference Model



Exemplar 2: Possible Cross-Disciplinary Design



Exemplar 3: Possible Cross-Disciplinary Model



Appendix I

Guidelines for the development of institutional Information Ethics curriculum offerings

Introduction

This appendix contains guidelines for the development (*i.e., the design, implementation and evaluation*) of institutionally-appropriate information ethics curriculum offerings. Since the institutional contexts where the curriculum will be implemented are different it is not possible to prescribe exactly what each institution has to do to ensure that the curriculum will be appropriate to the specific circumstances in which it will be implemented. The guidelines are, therefore generic in nature, based on the criteria for effective and efficient implementation. Each institution will have to adapt the guidelines to meet its particular needs, ensuring that the process takes place in accordance not only with generic curriculum development criteria but also with the administrative and academic protocols of its own institution.

The guidelines, which could be regarded as a curriculum development protocol, are presented as inter-dependent steps. As set out here the academic and administrative processes have not been separated but institutional designers might wish to draw up separate protocols for each.

Generic criteria for curriculum development

As indicated in the document, curriculum development typically takes place in at least four stages – planning, design, implementation and evaluation. In this appendix these stages have been broken down into a number of steps which are regarded as especially critical to the effective implementation of a new curriculum or programme.

The introduction of new programmes / curriculum offerings at universities is usually subject to a certain protocol in which both academic and administrative processes are stipulated. The steps described in this document and/or the sequence of the steps might therefore have to be adjusted to ensure alignment with the protocols of the university concerned. In this sense, once again, the steps described here are simply guidelines, not instructions or prescriptions. The context and existing protocols for the

development, approval and introduction of new programmes or course at the different institutions will be the primary procedural determinants.

Stage 1: Advocacy

Advocacy, i.e. selling an idea or cause, is crucial to the success of any endeavor, also as regards the introduction of information ethics as a curriculum offering at your institution. In order to “sell” the idea, you will first have to introduce people to the concept of information ethics, explain why it is important to use information communications technology ethically, why information ethics should be considered as a subject and how the institution would benefit by introducing such a subject into one or more of their programmes.

Awareness could be raised in many ways – designing and displaying posters at places where those who need to be persuaded congregate, starting an e-mail conversation, creating a web-site, placing it on the agenda for departmental or faculty meetings, or organizing seminars or workshops on the topic. Decisions on the procedures to be used will be determined by the culture and context of your particular institution but we have found that the steps set out below are relatively successful in creating an awareness of, and interest in, information ethics.

Step 1:

Arrange a meeting with the head/s of the department or faculty in which you work. Tell them what information ethics is all about and why you think it is important for the university to become involved in the creation of awareness on information ethics. Give the head/s an idea of what it is you want to do and how you think you could go about it if they were to give you the approval to go ahead. Once you have their support the whole process will be much easier.

Step 2: Staff meeting

Prepare and present a proposal for the introduction of Information Ethics to the members of the department or faculty to which you belong. The proposal should explain what information ethics is and why you think it is a good idea for your subject, department or faculty to get involved in the design and/or implementation of IE courses. Also indicate in the proposal how the introduction of an IE course would benefit the department, in which

formats (*units, modules, short courses, full or inter-disciplinary programme*) the course could be offered, which challenges its introduction might pose and what the financial, infra-structural and human resource implications of its introduction might be for the department concerned. Give department/faculty members the opportunity to critically discuss the proposal and rather than imposing it on them.

Step 3

Having gained the support of those in charge of your department or faculty you could now proceed with the raising of awareness amongst university staff members. We believe that this is best done by arranging an **awareness seminar or workshop**. Delegates should include all those who will in some or other way be affected by and/or involved in the implementation of the IE curriculum, i.e.:

- ❖ The **'gatekeepers'** (*i.e. executive staff members and administrators who have decision-making powers regarding the introduction of new academic programmes*)
- ❖ **Academics** who will be offering aspects of the IE curriculum
- ❖ **Representatives of students** who will be at the receiving end of the curriculum.

The awareness seminar/workshop would have been successful if those who arranged it can, on conclusion of the workshop, compile **a list of participants** who have committed themselves to being part of the curriculum development process.

Stage 2: Planning and preparation

If the curriculum offering you presented to the gatekeepers is going to be offered only in your department/faculty, train a team of volunteer curriculum designers to help in the design of the IE course concerned. However, if the proposed course is going to be a cross-disciplinary one or if it is going to be offered in more than one department or faculty, first present your proposal at an inter-departmental, inter-faculty or Senate meeting before arranging a curriculum design workshop.

Step 1: Staff development

Having gained support for the introduction of Information Ethics as a university offering, arrange a ***curriculum development workshop*** for *academics* – and *students*, if this is deemed appropriate - who committed themselves to being part of the implementation of an Information Ethics curriculum, irrespective of whether they want to do so by integrating elements of the curriculum into existing programmes by offering information ethics themes as short courses or by designing a cross-disciplinary programme on Information Ethics.

The curriculum development workshop serves a ***triple purpose***.

- i) In the ***first*** instance it creates an opportunity for participants to ***learn*** more about typical ***curriculum development*** processes and challenges
- ii) In the ***second*** instance it gives all those who are going to be involved in the workshop the opportunity to ***critically engage with proposed curriculum models***, thereby giving them a sense of ***co-ownership*** of the end product. As indicated earlier ‘ownership’ of the curriculum is critical to its successful implementation.
- iii) In the ***third*** instance the workshop serves as basis for the ***design*** of an ***institutionally-appropriate curriculum***, one with which all those who are going to be involved in its implementation will feel comfortable.

In order to achieve all three these purposes the workshop organizers will have to ensure that workshop participants:

- i) ***Understand*** the difference between the ***terms***, ‘*curriculum development*’, ‘*curriculum design*’, ‘*curriculum implementation*’, and ‘*curriculum evaluation*’ as used in this IE document.
- ii) ***Know*** what the accepted *academic and administrative protocols* are for the introduction of new academic programmes, modules or units at your institution
- iii) Have the opportunity to ***critically discuss*** the curriculum models presented in *Appendix H* of this document, and then either
- iv) ***Choose***, from the models presented or ***design*** a new Information Ethics Model that would adhere to the protocols of your institution

Deciding on the curriculum model that will be used in your institution – whether this is one of the models illustrated in the Curriculum Framework

or a different model decided on during the workshop – is a key indication of the success of this workshop.

A second indicator of success is the **willingness** of participants to become part of one or more **curriculum design teams**. One team could, for example, be tasked to design an academic orientation would introduce students to information ethics as a concept – something similar to the first unit in the IE Curriculum Framework. Another team could decide to work on a unit dealing with philosophical or legal perspectives on information ethics, and yet another with information ethics as an imperative for the development of African knowledge and information societies. One or more teams could even decide to focus on the integration of information ethics elements into existing programmes, using one or more staff members from their own departments to help them.

What is of the utmost importance at this stage is that the organizers of the consultation workshop should keep a **written record** of any commitments made and institutional conditions/requirements for new programmes, and that they arrange a full day follow-up workshop on **curriculum design** to ensure that the prospective designers understand and adhere to the curriculum design criteria specified in the Curriculum Framework.

Stage 3: Curriculum design

You will note that we are now using the term, '**curriculum offerings**' instead of 'curriculum'. The reason for this is that we do not know what the model looks like which participants at your previous workshops chose as *their* curriculum model. A curriculum 'offering' could, therefore, be a **theme**, a **unit**, a **module**, a **short course** or a **full programme**. The design criteria and process stay the same, though, irrespective of the format of the curriculum offering chosen.

The purpose of this workshop is to give curriculum design teams the opportunity of first **engaging with** the **curriculum design criteria** spelt out in the Curriculum Framework document and then **applying** these in the design of their own curriculum courses.

In terms of the design criteria for an information ethics curriculum indicated in the main document, every single offering should be **thematic** in nature, **purpose-focused**, and **outcomes-based**. In addition to this, the learning content to be covered in each offering should be both **conceptual**

(cognitive) and **contextual** (practical) in nature and should contribute to **students' acquisition** of the knowledge, skills and attitudes described in the outcome statements of the curriculum offering concerned.

Step 1: Identification of themes

The **first step** in the design of an Information Ethics curriculum offering (*whether this is a unit, module, short course or full programme*) is to **identify the theme/s** around which the curriculum offering will be designed. Themes could be generic/broad (*ICT and the Law, for example*) or specific/narrow (*cyber crime, or e-governance, for example*).

Step 2: Determine the purpose of curriculum offerings

The **second step** is to **justify** the inclusion of each of the *themes* included in the curriculum as a whole. Let's say one of the themes is 'African value systems and ICT'. Curriculum designers need to critically reflect on the reason/s why it is important to include this theme. Put differently, they need to formulate a **purpose statement**. This statement should indicate how the theme will promote an ethical disposition in students who register for the unit in which this theme is covered. The same procedure should then be followed for each thematic unit.

Step 3: Formulate purpose-focused outcomes for curriculum offerings

The **third step** is to **break down** the purpose statement of each thematic offering into a number of *outcome statements*. Outcome statements describe what students should **know, understand** and **be able to do** with the content, values, attitudes and skills they acquired during their engagement with the theme/s addressed in the curriculum offering concerned.

Curriculum designers are free to replace the term, '**outcome**', with terms like '*goals*', '*aims*' or '*objectives*' but, whichever term is used, the outcomes must be formulated in such a way that they describe the *desired end results* of each offering in terms of student **performance** (*i.e. in terms of how student should demonstrate their knowledge, understanding, attitudes and skills*), bearing in mind the academic year level at which the offering will be pitched.

Step 4: Use the outcome statements of curriculum courses as basis for the selection of content

The ***purpose*** of an Information Ethics curriculum is to equip students with the knowledge, skills and attitudes they need to use information and information communications technology in responsible and accountable ways. In order to do so the content selected must develop students' ***cognitive ability*** (*conceptual knowledge*) as well as their ***ability to apply*** their knowledge and understanding in different contexts and circumstances (*practical knowledge and skills*). By implication the ***content*** (*knowledge, skills and attitudes*) selected for each curriculum offering should include the conceptual *and* contextual /practical) knowledge required for the mastery of the pre-determined outcomes of each curriculum offering.

- ❖ First, ***select the conceptual knowledge*** particular to the curriculum offering concerned. Such knowledge would include key concepts, philosophical perspectives, information and media laws, indigenous knowledge and value systems.
- ❖ Second, having decided on the specific concepts, perspectives, legislation, indigenous knowledge and value systems, ***select teaching and learning activities*** that lend themselves to the *development of cognitive reasoning* (i.e. the *analysis of, critical reflection on and evaluation of* all of these) within the *context* of African development in the area of information ethics.
- ❖ Third, ***select learning activities*** that will give students the opportunity to apply what they have learnt in *actual* (real-life) and/or *simulated* (imaginary) social, academic, business, and career contexts and situations.
- ❖ Fourth, ***select assessment activities*** that will create opportunities for students to demonstrate their *conceptual knowledge, reasoning and application skills* and their *commitment* to the ethical and responsible use of information in general and of information communications technology in particular.
- ❖ Fifth, ***organize*** all of this (content, methodology and assessment) into coherent units, modules or programmes that will simultaneously facilitate mastery of the selected content and the development of a critical awareness of the importance of information ethics.

It is of the utmost importance to remember that the content selected for each curriculum offering should not promote a particular dogmatic perspective; rather, it should develop students' ability to compare different perspectives with a view to developing a holistic information ethics code that is both personally and socially responsible and accountable.

Step 5: Develop an implementation plan

It is a fait accompli that there is a direct correlation between the effectiveness of curriculum implementation and the planning and preparation that preceded the actual implementation. It is therefore necessary to **develop a staged implementation plan**. This plan should at least indicate

- i) what should be done prior to and during implementation;
- ii) which structures should be in place prior to implementation, and whose responsibility it is to establish these;
- iii) which resources (*finances, personnel, teaching/learning materials, etc.*) are crucial to effective implementation, and whose responsibility it is to see that these are acquired or developed;
- iv) who should be trained in what, by whom, and when, and
- v) who would be responsible for monitoring and evaluating implementation of the curriculum to determine its effectiveness and/or to arrange for support if and when this is necessary.

Step 6: Review both the product and the process

Finally, **evaluate** the *curriculum product*, the *curriculum design process*, and the *curriculum implementation plan*.

- ❖ The **curriculum product** (*i.e. the unit, module or programme concerned*) would be acceptable if it is **appropriate** (in terms of its *purpose, target audience and institutional capacity*), of an acceptable **academic standard** (*making the cognitive demands expected of students at different academic year levels*), **coherent** (*sequencing of sections/parts to form a meaningful whole, e.g. aligning content and activities to the outcomes*) and **cohesive** (*not rambling or inconsequent, i.e. making sense*).
- ❖ The **design process** would have been successful if all the participants feel that their views and contributions were valued throughout, that the curriculum belongs to all of them and that they want to be part of

its implementation. It might be a good idea to ask them to reflect in writing on the way they experienced the whole process: not only will they have the opportunity of reflecting on what they have done but it will also provide the organizers with feedback about things that could have been done differently or alert them to problems that might occur during implementation.

- ❖ The **implementation plan** would be up to standard if the objectives, activities and timelines are realistic, attainable and appropriate to the institutional context and culture.

Stage 4: Quality control

The protocol to be followed in obtaining approval for the introduction of new curriculum courses differs from institution to institution. It follows that each institution must follow the protocol laid down by its own Senate and/or Ministry of Education. The protocol described below is therefore no more than a set of generic guidelines informed by procedures typically followed at higher education institutions.

On completion of the IE course/curriculum, follow the protocol prescribed by your institution for the approval or registration of new or adapted academic programmes. This might include one or more of the following:

- ❖ Completing a template in which the main components of the proposed curriculum (*theme/s, purpose statement, outcomes, course content, instructional methodology, and assessment*) are summarized
- ❖ Completing a template which summarizes the curriculum implementation plan, with indications of possible financial, infra-structural and human resource implications
- ❖ Presentation and discussion of the templates at meetings of the relevant departments, faculties, or Senate
- ❖ Adjusting the templates in terms of recommendations made or instructions received at the above-mentioned meetings
- ❖ Submission of approved templates to university councils, provincial or national councils for higher education, departments or ministries of education, national qualifications authorities and/or quality assurance bodies

Since these protocols differ from institution to institution and country to country the protocol described here is in no way prescriptive: rather, it

describes what is commonly accepted as generic quality control procedures which might or might not reflect existing institutional protocols. Should no protocols be in place these procedures might serve as basis for the development of institutional protocols that could be used for quality assurance or control purposes.

Stage 5: Curriculum implementation

Curriculum implementation is the stage when the curriculum, as conceptualized and designed for a specific purpose, context and target group, is delivered to designated target groups. The actual implementation process consists of teaching, learning and assessment. The choice of teaching, learning and assessment methods or activities is the prerogative of the lecturer concerned and is typically determined by the academic readiness and learning styles of the student target group, the outcomes to be achieved, the curriculum content to be covered, the resources available, and the lecturer's own teaching style. In the case of the information ethics curriculum it is, however, advisable to ensure that teaching, learning and assessment methods chosen will create opportunities for students to actively engage in the discussion and critical analysis of information ethics issues and dilemmas.

Critical to effective learning and assessment is the **quality** of teaching, teaching/learning resources and assessment instruments. Lecturers may, therefore, have to be trained in the development and use of instructional resources¹ and assessment instruments. Whether such training is generic or specific to different subjects or disciplines has to be determined by the institution concerned.

Given the inter-disciplinary nature of the information ethics curriculum, it might be useful to establish a multi-disciplinary training team that could, in turn, train and support other staff members in the use of the different teaching/learning methodologies and assessment activities described in the curriculum framework. Such a team would ideally include a philosopher, an information communications or library and information science specialist, an anthropologist or sociologist, and a person with legal knowledge and expertise.

1 The ACEIE listed its own study materials in Appendix B. Institutional materials developers could instead of developing new study materials, align the ACEIE materials to their own needs or contexts.

How the trainers are selected and trained is the prerogative of the institution concerned. Regardless of the decision taken, it is advisable to ensure that:

- ❖ Participating lecturers are trained in resource development, instructional methods and the designing of assessment instruments, and that this should ideally happen prior to implementation as well as during implementation should the need arise. Moreover, lecturers should receive ongoing support during implementation until such a time that they have to confidence to 'go it alone'.
- ❖ Trainers should be knowledgeable not only in their own discipline or subject area but also in the field of information ethics.
- ❖ Teaching/learning resources are developed, subjected to strict quality controls, and ready for use prior to implementation
- ❖ The standard and quality of assessment instruments, the fairness of assessment procedures and the accuracy of assessment results be strictly controlled during the course of implementation.

Stage 6: Curriculum evaluation

Curriculum evaluation should be both *illustrative/continuous* and *summative*. The effectiveness and efficiency of implementation should be monitored on a continuous basis so as to identify and immediately address weaknesses or flaws in the implementation plan and/or methods used. This should, however, be done without undermining lecturers' integrity, professionalism, confidence or enthusiasm.

The effectiveness of the curriculum as a whole should also be evaluated at the end of an implementation cycle, i.e. when all the units or modules have been covered, in order to decide (a) whether it is achieving what it set out to achieve in terms of student learning, institutional benefits and the development of African information societies; (b) whether there is a need to review certain sections or procedures, and (c) whether the curriculum should be continued as is, reviewed, or terminated.

Appendix J

Information Ethics Research Needs

<i>UNIVERSITY</i>	<i>INFORMATION ETHICS RESEARCH NEEDS</i>
<i>Zambia</i>	Information ethics in the 21st century E-waste versus information ethics Converging technologies & their impact on information ethics Surveillance & its impact on information ethics
<i>Tennessee</i>	Distance education Service learning Training lecturers Alumni feedback on the value of having taken and information ethics course
<i>Uganda</i>	Research in teaching of information ethics Information ethics challenges in the workplace Teaching information ethics Ethics in the application of ICTs in the LIS profession Information ethics curriculum development
<i>Zululand</i>	Information ethics teaching & learning Information ethics research & activities in Africa & the developing countries Information ethics cultural studies Information ethics philosophy Information ethics & technological issues – Internet/cybernetics
<i>Bulawayo</i>	Information ethics & academic disciplines Moral philosophy, Types of ethos & Natural law
<i>Pretoria</i>	Ethical issues & emerging technologies 'softer' (NOT computer) issues around information security Any other research relevant to what we cover in our teaching
<i>Makerere</i>	IE curriculum development le challenges in the workplace Teaching IE Research in teaching of IE
<i>Ghana</i>	Fair use theory Freedom of information
<i>Botswana</i>	Information poverty Ethics in the electronic age Trust Privacy Freedom of information Philosophical foundation fo ethics African ethics – Ubuntu

Appendix K

Applicable extractions from the wording of the Memorandum of Agreement between the University of Pretoria and the South African Department of Communications.

MEMORANDUM OF AGREEMENT (MOA)

Made and entered into by and between the
Government of the Republic of South Africa

Department of Communications

Hereinafter represented by

Ms. Rosey Sekese

In her capacity as the Director-General of the
Department of Communications,
duly authorized thereto
(Hereinafter referred to as the DoC)

and the

University of Pretoria

Hereinafter represented by

Professor C M de la Rey

in her capacity as Vice Chancellor and Principal
of the University of Pretoria, duly authorised thereto
(Hereinafter referred to as UP)

WHEREAS the DoC, in line with the internationally agreed outcomes of the World Summit of the Information Society, wishes to:

- ❖ promote academic research in the field of Information Ethics;
- ❖ develop tools for the practical application of ethical reasoning; and
- ❖ ensure that the opportunities offered by the developing Information Society are effectively utilised for socio-economic advancement and a better life for all.

Interpretation

In this Agreement the following expressions shall bear the meanings assigned to them below and cognate expressions bear corresponding meanings:

- 1.1 **“DoC”** means the Government of the Republic of South Africa on behalf of its Department of Communications, Ms. Rosey Sekese in her capacity as the Director-General of the Department of Communications, duly authorized thereto;
- 1.2 **“The University”** means the University of Pretoria, a higher education institution and juristic person established in terms of the Higher Education Act 101 of 1997, as amended, with its registered address at Lynnwood Road, Hillcrest, Pretoria, 0001 duly represented by Professor C M de la Rey, Vice Chancellor and Principal of the University;
- 1.3 **“Agreement”** means this Agreement concluded between DoC and the University;
- 1.4 **“Funding”** means the funding referred to in clause 3 and which is provided by DoC for purposes of the project;
- 1.5 **“Party”** means either DoC or the University;
- 1.6 **“Parties”** means DoC and the University;
- 1.7 **“Period”** means the duration of this Agreement as cited in clause 5;
- 1.8 **“Representatives”** means the appointed representatives by the Parties to liaise and make decisions where necessary to ensure that each Party complies with this Agreement;
- 1.9 **“Signature Date”** means the date of the last Party signing this Agreement;
- 1.10 **“The Centre”** means the African Centre of Excellence for Information Ethics.
- 1.11 **“The Project”** means the project with the aim to establish an African Centre of Excellence for Information Ethics at the University of Pretoria and to focus on research, training and advice as more fully described in Annexure A attached hereto.

The Collaboraion

- 2.1 The DoC hereby undertakes to collaborate with UP to further develop the African Network for Information Ethics (ANIE) amongst the African academics and policy makers on the application of Ethical Reasoning to e-government. Through this, the parties aim, in collaboration with other stakeholders such as the ANIE, to establish an African Centre of Excellence for Information Ethics.
- 2.2 This agreement is intended to build on previous collaborations with the academic community, which includes the University of Pretoria, in order to develop research in the field of Information Ethics, in line with the WSIS Plan of Action.

The Centre: Deliverables

- 3.1 An African Centre of Excellence for Information Ethics will be established at the University of Pretoria in accordance with the objectives of this agreement, subject to the relevant approval for the establishment being obtained within the relevant University structures.
- 3.2 The establishment and administrative operations of the Centre shall be subject to the rules, regulations, policies and procedures of the University of Pretoria.
- 3.3 Support establishment of other Ethics Centres in Africa through the African Ethics Research Centre Network.
- 3.4 Convening, coordination and administration of Ethics Conferences, and follow-up implementation of the conference resolutions.
- 3.5 Hosting of Ethics Award Ceremonies in collaboration with other partners as determined.
- 3.6 The Centre will focus on research and training in Information Ethics, as more fully described in Annexure A attached hereto.
- 3.7 The Director of the Centre shall be appointed and remunerated by the University.
- 3.8 The University will provide a functional office for the Centre.
- 3.9 Research and publication of Information Ethics Journals.

Period

This Agreement shall commence on the signature date and shall continue for a period of three (3) years, where after the Parties may elect whether to renew the Agreement on the terms and conditions acceptable to the Parties at the time.

ANNEXURE A OF THE MOA

Objectives for the envisaged Africa Centre of Excellence for Information Ethics

The African Centre of Excellence for Information Ethics will provide training and research to support the following objectives:

- 1.1 **Development of Information Societies:** to create an awareness of the importance of information in different communities and amongst responsible persons and information practitioners, in terms of where to access information and overcome inequalities in the access to information, how to integrate it, and to create awareness of societies dependence on information.
- 1.2 To provide training for government officials in different areas of government with respect to ethical reasoning applied to e-government; and ensuring awareness of ethical issues arising from the management of information amongst information practitioners.
- 1.3 **Education in information ethics:** to develop short course to enhance ethical reasoning amongst information practitioners.
- 1.4 **Community development activities:** to promote the effective and ethical use of information for different communities, such as ensuring SMMEs are aware and able to handle responsibly information flows using ICTs, such as for access market information, business marketing, and in running businesses.
- 1.5 **Knowledge distribution:** to ensure the development of the information ethics teaching curriculum amongst 12 African universities participating in the teaching of Information ethics.
- 1.6 **Internationalisation of Information Ethics policies and practises:** to promote key proposals and research as agreed concerning the research on Information Ethics and its application, for consideration within African and International inter-governmental organisations, such as the AU, African Regional Communities and UNESCO.

Collaboration with Stakeholders

The African Centre of Excellence for Information Ethics (ACEIE) will service the objectives of the African Information Ethics Network (ANIE), the DoC and the UP in terms of this agreement. It will coordinate activities in

the field of research and training in Information Ethics in Africa with the following related institutions:

- 2.1 Africa Information Ethics Network (ANIE)
- 2.2 UNESCO
- 2.3 South African Department of Communications (DoC)
- 2.4 University of Pretoria
- 2.5 University of Wisconsin Milwaukee (USA)
- 2.6 The Capurro-Fiek Foundation (Europe)

All stakeholders will be acknowledged in all activities of the centre and will have access to all the products of the centre.

Scope of Work

The focus areas of the African Centre of Excellence for Information Ethics are: research, lecturing, workshops, biennial ANIE Conferences and advice to the SA Government and, if required, to inter-governmental structures in Africa. This will include the following activities:

- 3.1 Research focusing specifically on the development of a curriculum to teach Information Ethics at universities in Africa.
- 3.2 The development and implementation of a roll-out plan to have active teaching at 12 or more African universities within 2 years. The 12 African universities will be identified by ANIE and will form the base of the curriculum development project.
- 3.3 The development of a proposal in consultation with DoC to be made to the University of Pretoria to consider the establishment of a formal Research Chair in Information Ethics.
- 3.4 The African Centre of Excellence for Information Ethics will fulfil the role of Secretariat for an ANIE Board that will guide the academic and research work of the Centre.
- 3.5 In addition to the activities included in this agreement, the African Centre of Excellence for Information Ethics, will receive and make proposals for activities of the Centre and to the Department of Communications, and report on the outcomes achieved in terms of the formal objectives indicated under paragraph 1 above.
- 3.6 Initiating, organising and coordinating annual research activities on Information Ethics in Africa.

- 3.7 Support activities in Information Ethics organised by stakeholders as described in paragraph 2 above.
- 3.8 Prepare lectures and training on aspects of Information Ethics for Government Officials, building on the work undertaken at the African Information Ethics Conferences and e-Governance workshop.
- 3.9 Support the SA Government through reports and research outcomes in its objectives to play its international role in information ethics.
- 3.10 Provide comprehensive income and expenditure reports and financial accounts, as well as project reports relating to the attainment of the project objectives, to the DoC.
- 3.11 Develop proposals in consultation with the DoC and other relevant stakeholders with respect to the development of training programmes to fulfil the objectives set out in this agreement under paragraph 1 above.
- 3.12 Provide normal office management and administration activities.

The Management Structure

- 4.1 The office is planned for an initial 3 years and will as agreed be situated at the Department of Information Sciences on the 6th floor of the Information Technology Building at the University of Pretoria in Lynnwood Pretoria.
- 4.2 The financial and administrative aspects of the office will be managed by the Executive Director, Coetzee Bester under the guidance of Prof Theo Bothma and the Department of Information Science at the University of Pretoria. While formally establishing the Centre, Prof Bothma and Mr Bester will continue with the objectives of this MoA as stipulated in paragraph 3 and manage financial and administrative aspects as the Executive Committee.
- 4.3 The research and related academic aspects of the Centre will be guided by Prof Theo Bothma and the Academic Advisory Board of the Centre (Board) with regular reports to UNESCO (Windhoek office), all the ANIE role players, and DoC.
- 4.4 The Board will inter alia include the following persons who are all ANIE Academic Board members: Prof Rafael Capurro (Europe), Prof Johannes Britz (USA), Prof Dennis Ocholla (SA) and Prof Stephen Mutula (Botswana) and the HOD Prof Theo Bothma. Mr Jaco du Toit

(UNESCO) and Mr Themba Phiri/representative(s) of the DoC will also serve on the Board while the administration of the Board will be managed by Mr Coetzee Bester.

- 4.5 The African Centre of Excellence for Information Ethics will schedule formal meetings on a quarterly basis between the Executive Director of the Centre and the DoC to discuss the specific projects concerning initiative to fulfil the objectives of the agreement and to provide feedback and quarterly reports on the implementation of the objectives, as well as the financial reports, as indicated under the *Scope of Work* above.
- 4.6 Ad-hoc meetings can be scheduled as required for urgent matters.

Expected Deliverables

- 5.1 The DoC will provide personnel to work with the UP for administration and project management support.
- 5.2 The DoC will fund the establishment and launch of the Centre of Excellence for Information Ethics by 2011.
- 5.3 The DoC will fund, provide project support and fund the Information Ethics Research workshops in 2011, 2012 & 2013.
- 5.4 The DoC will fund the workshops with the 12 universities that are members of the ANIE to introduce the curriculum on Information Ethics
- 5.5 The DoC will fund and participate in the workshops with the Provinces to introduce the concept of Information Ethics within government.
- 5.6 The DoC will fund and participate in the 2012 ANIE Conference in Pretoria.

The DoC's Obligations

- 6.1 The DoC will allocate funding for the attached 3-year budget, according to the payment schedule i in paragraph 3.2, to be transferred to the University of Pretoria as a ring-fenced allocation for the purpose of implementing this agreement.
- 6.2 The DoC will participate in the Board as indicated under Management Structure above.

- 6.3 The DoC will meet on a quarterly basis with the Executive Director of the African Centre for Excellence for Information Ethics, by arrangement with the Centre.

The University of Pretoria's Obligations

- 7.1 The project finance will be managed according to the UP's financial practises and procedures and the audit reports will reflect the items in the attached budget, Annexure B.
- 7.2 The UP will participate in the Board as indicated under Management Structure above.
- 7.3 The UP will receive the funding from the DoC as a ring fenced allocation specifically for the use of the African Centre of Excellence for Information Ethics, in accordance with the objectives of this agreement, and following the management practises and structures outlined in this agreement.
- 7.4 Funds that are not used for a specific item or in any specific time may be used in the following year up until the end of the agreement. All unused funds at the end of this agreement will be paid back to the DoC within 3 months. A final report on all aspects of the agreement will then also be handed to the DoC.
- 7.5 At the end of the Agreement, all office equipment becomes property of the UP.