

Development of an embedded entrepreneurship module in a clinical nursing specialist programme

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Abstract

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Over the last few decades, the tendency toward entrepreneurship in nursing has increased due to social and economic factors. In South Africa, there are increased opportunities for nurses to develop their own businesses with the implementation of the National Health Insurance (NHI). To respond to the communities' needs and implementation methods of the NHI, nurse specialists need to redefine their roles from purely hospital-based employees to business owners who work in the community and function as nurse entrepreneurs in different domains of care. In order to develop and nurture nursing entrepreneurship, a systemic approach is required that consists of enabling legal frameworks, socio-economic, professional and personal support, and educational preparation of nurses for this independent role. Higher education in general and nursing programmes specifically have not been focused or designed toward developing entrepreneurial competencies and mindsets toward self-employment. There is a need for the inclusion of entrepreneurship education in the postgraduate diploma in nursing at a specific university to improve nurse specialists' interest in self-employment and promote positive attitudes toward entrepreneurship.

The purpose of the project-based thesis was to develop an embedded entrepreneurship module for nursing students studying toward a speciality in clinical nursing in the postgraduate diploma in nursing offered by a nursing department at a specific university in South Africa. In order to achieve the purpose of the study, the following objectives were set:

- Explore and describe the relevant content and education process to be included in an entrepreneurship module for clinical nurse specialists.
- Develop and describe the education module in business practice and entrepreneurship for clinical nurse specialists.
- Evaluate the education module and implement recommendations for improvement of the education module.

A three-phase module design process was followed. Phase 1 entailed a literature review on entrepreneurship education and expert consultation. The information in phase 1 led to the development of a conceptual framework. A module map and design outline were created based on the conceptual framework and the guideline documents by the regulatory bodies and legislation, after which the module descriptor was designed. Phase 3 entailed the evaluation of the module with final corrections implemented.

Keywords

Business management, entrepreneurship education, module, nursing, specialist

Table of contents

1	1 Orientation to the study									
	1.1	Introdu	ction	1						
	1.2	Backgr	ound and justification	1						
	1.3	Probler	n statement	3						
	1.4	Purpos	e and objectives	4						
	1.5	Definition	on of key concepts	4						
		1.5.1	Clinical nurse specialist	4						
		1.5.2	Education module	5						
		1.5.3	Nurse entrepreneur or intrapreneur	5						
2	Rev	iew of lite	erature	7						
	2.1	Introdu	ction	7						
	2.2	An argu	ument for entrepreneurship education	7						
	2.3	Entrepr	reneurship pedagogy	8						
		2.3.1	Entrepreneurial education paradigms and theories	8						
		2.3.2	A competency-based approach to entrepreneurship education	9						
		2.3.3	Mindsets focused entrepreneurial education models	12						
	2.4	Entrepr	reneurial competencies required by the clinical nurse specialist	13						
		2.4.1	International and national views and requirements	13						
		2.4.2	Competencies needed by nurse entrepreneurs	14						
3	Proj	ect desiç	gn and implementation	16						
	3.1	Introdu	ction	16						
	3.2	Contex	t	16						
	3.3	Project	plan	18						
	3.4	Project	implementation of phase 1: data gathering and consultation	19						
	3.5	Project	implementation of phase 2: module development	22						
	3.6	Project	implementation of phase 3: module evaluation	26						
4	Prod	duct des	cription	28						
	4.1	Introdu	ction	28						
	4.2	Module	descriptor structure	28						
		4.2.1	Pass requirements	31						
	4.3	Instruct	tional and assessment methodology	31						
	4.4	Conclu	sions and recommendations	32						
RI	EFER	RENCES	·	34						
ΑI	PPEN	IDICES		39						
	App	endix 1.	Exit level outcomes and assessment criteria: postgraduate diploma in							
	nurs	sing		39						
	App	endix 2.	NQF 8 level descriptors	43						
	App	endix 3. Product: developed education module44								

Abbreviations

CHE Council on Higher Education

ELOs Exit level outcomes

ICN International Council of Nurses
NEI Nursing Education Institution
NHI National Health Insurance

NQF National Qualification Framework SANC South African Nursing Council

1 Orientation to the study

1.1 Introduction

The focus of the product-oriented thesis is entrepreneurship education in the context of a clinical nursing specialist programme. In the current nursing education institution (NEI) and, as far as the researcher knows, in South Africa, entrepreneurship education is not included in nursing programmes. This chapter will outline the background and justification for the inclusion of entrepreneurship education in the clinical nursing specialist programme and set out the purpose, objectives and outcome for the study.

1.2 Background and justification

Nursing is not commonly associated with entrepreneurial ventures such as setting up a private business, as are other fields of study, for example the hospitality industry. Historically, nursing has been viewed as an altruistic act of love and service to humanity, as illustrated by the image of Florence Nightingale selflessly caring for injured soldiers during the Crimean War. There has long been the notion that costing nursing services is unprofessional (International Council of Nurses [ICN] 2004, 24).

In modern-day nursing, nurses are increasingly independent due to multiple factors, such as healthcare provider shortages, the professionalisation of nursing and nurses being acknowledged as highly skilled healthcare providers. Nurses are referred to as the backbone of the healthcare system (Macri 2020, 1) and often provide health services to underserved communities (Hamric, Spross & Hanson 2009, 27). Nurses play an important role in health systems across the world by meeting the needs for secure, high-quality, patient-centred, accessible and financially attainable healthcare (Jahani, Abedi, Elahi & Fallahi-Khoshknab 2016, 45).

Over the last few decades, the tendency toward entrepreneurship in nursing has increased due to social and economic factors (Jahani & al. 2016, 45). These factors include, among others, higher levels of basic education, easier access to higher education for nurses, growing unemployment and underemployment among nurses, the changing health needs of the population, the inability of health services to meet community needs and increased consumer awareness and demands (ICN 2004, 9). Various entrepreneurial opportunities exist for nurses who possess a wide variety of knowledge and skills. Such entrepreneurial opportunities include (but are not exclusive to) primary healthcare clinics, home care and specialised home care (e.g. wound care, chemotherapy), education (e.g. training on communication or conflict management), consulting (clinical, management and research-related) and research (DeSantis & Scales 2015, 94–95).

Internationally, healthcare reform is creating opportunities for nurses, especially those who hold a clinical nursing specialisation, to play a pivotal role in functioning independently to meet the needs of various populations and diverse healthcare situations (ICN 2020, 12). Nurse entrepreneurs are able to respond to the limitations of healthcare delivery systems across the world by providing not only specific nursing care-related services but also participating in the development of improved technology, products and systems. This enhanced independent functioning and the need for quality health service delivery by nurses create opportunities for nurse to increasingly function as business owners and entrepreneurs in the healthcare domain. Nurse entrepreneurs perform a variety of functions related to their areas of specialisation and expertise, for example direct patient care services, educational, research, writing, consultation and development of products and devices (Carlson 2018, 1; Vannucci & Weinstein 2017, 57). Furthermore, nurses are required to function as intrapreneurs in health services, developing, commissioning and running units within existing broader healthcare services. Nurse intrapreneurs are often those nurses in the healthcare organisation who are "innovators and thought leaders" that improve overall organisational success (Carlson 2018, 1).

In South Africa, there are increased opportunities for nurses to develop their own businesses with the implementation of the National Health Insurance (NHI). Within the NHI, health service users will be able to choose any NHI-contracted provider in their geographic area for regular health services (Department of Health n.d.). In the future, the NHI will enter into contracts with hospitals, private health practitioners and public clinics to provide services, implying more opportunity for nurses to become business owners and entrepreneurs within the reformed national health system. To respond to communities' needs and the implementation methods of the NHI, nurse specialists need to redefine their roles from being purely hospital-based employees to being business owners who work in the community and function as nurse entrepreneurs in different domains of care (Jahani, Abedi, Fallahi-Khoshknab & Elani 2018, 230).

There are, however, limited numbers of nurses in entrepreneurial ventures globally, with an estimated 0.5–1% of nurses working in entrepreneurial roles worldwide. This low percentage is due to the influence of legal restrictions to practise, third-party payments, such as health insurance, and access to support services (ICN 2004, 9). Jahani & al. (2016, 50) outline the limitations to entrepreneurial practice for Iranian nurses as multifaceted, but point out that nursing education does not prepare nurses for entrepreneurial roles but rather "to fill the pre-defined occupational gaps." Globally, nurses' entrepreneurial competencies are not developed and curricula lack business-related content (Arnaert, Mills, Sol Bruno & Ponzoni 2018, 497; Vannucci & Weinstein 2017, 58). The researcher further argues that entrepreneurship education is not commonly and adequately included in education programmes for nurses in the South African nursing curriculum framework.

1.3 Problem statement

In order to develop and nurture nursing entrepreneurship, a systemic approach is required that consists of enabling legal frameworks, socio-economic, professional and personal support, and educational preparation of nurses for this independent role (ICN 2004, 3).

Nursing education has to update itself and promote the entrepreneurial potential of its graduates, not only to develop the profession but also to meet societal needs and trends. Promoting the entrepreneurial potential of future nurse specialists has the potential to increase their entrepreneurial competence, consciousness, intentions and behaviour. Furthermore, increased entrepreneurial behaviour has the potential to increase job creation and economic growth (Horng, Hsiao, Liu, Chou & Chung in press, 2).

Higher education in general and nursing programmes specifically have not been focused on or designed toward developing entrepreneurial competencies and self-employment mindsets (Boahemaah, Xin, Dodbe & Pomegbe 2020, 124). The focus has been mainly on the employability of nurses. Even though basic nursing administration is included to varying degrees and complexities in nursing curricula at undergraduate and postgraduate level, the concepts of entrepreneurship and business management are limited and generally excluded (Arnaert & al. 2018, 494). The ICN's (2004) guidelines on nurse entrepreneurs and intrapreneurs providing nursing services mention that post-basic education is required, but are silent about inclusion of entrepreneurship competencies in such education programmes.

In South Africa, nurses who are interested in obtaining knowledge and skills in business management and entrepreneurship often undertake the lengthy and costly route of enrolling in a master of business administration qualification. There is a need to develop the business acumen and entrepreneurial skills of clinical nurse specialists during their advanced training programmes.

A specific university was in the process of developing two postgraduate diplomas in nursing in 2020, one in occupational health nursing and the other in oncology and palliative care nursing. These programmes are offered at the level of a postgraduate diploma and lead to registration with the South African Nursing Council (SANC) as clinical nurse specialists. There is a need for the inclusion of entrepreneurship education in the postgraduate diploma in nursing to improve nurse specialists' interest in self-employment and promote positive attitudes toward entrepreneurship. This in turn will improve the self-employment ability required to prepare nursing students' minds entrepreneurially (Boahemaah & al. 2020, 124–125). Based on this identified need and gap in the offering of postgraduate diplomas in nursing in the specific NEI, and arguably in South Africa, the purpose and objectives discussed below were set for the study.

1.4 Purpose and objectives

The purpose of the project-based thesis was to develop an embedded entrepreneurship module for nursing students studying toward a speciality in clinical nursing through the postgraduate diploma in nursing offered by the nursing department at a specific university in South Africa. The embedded approach implies including content and processes to develop entrepreneurship in courses with other subjects or programmes to enhance entrepreneurship intentions and competencies (Pittaway & Edwards 2012, 783). In this case, including an embedded entrepreneurship module entailed a subject on entrepreneurship and business management in the two postgraduate diplomas.

In addition to the science and literature of entrepreneurship education, the Higher Education Act 101/1997 (as amended), Nursing Act 33/2005 (as amended) and frameworks by the South African Council on Higher Education (CHE) and the SANC guided the development of the module.

In order to achieve the purpose of the study, the following objectives were set:

- Explore and describe the relevant content and education process to be included in an entrepreneurship module for clinical nurse specialists.
- Develop and describe the education module in business practice and entrepreneurship for clinical nurse specialists.
- Evaluate the education module and implement recommendations for improvement of the education module.

The empirical process that was followed to achieve these objectives is discussed in chapter 3.

1.5 Definition of key concepts

1.5.1 Clinical nurse specialist

According to the ICN (2020, 12), a clinical nurse specialist is an advanced practice nurse who has "advanced nursing knowledge and skills, educated beyond the level of a generalist or specialised nurse, in making complex decisions in a clinical specialty and utilising a systems approach to influence optimal care in healthcare organisations." According to the SANC (2012, 1), a clinical nurse specialist has in-depth knowledge and expertise in specialist nursing clinical practice areas, for example psychiatric nursing or critical care nursing. A clinical nurse specialist has to complete a postgraduate diploma in the specific area of specialisation. This qualification will yield a professional registration with the SANC as a nurse specialist (e.g. nurse specialist: psychiatric nursing). The clinical nurse specialist provides direct and indirect care as summarised in table 1.

Table 1. Direct and indirect care provided by the clinical nurse specialist (ICN 2020, 14)

	Direct care		Indirect care
_	Conducts holistic assessments of individu-	-	Performs consultancy functions for other
	als and families, formulates nursing diag-		nurses and healthcare professionals.
	noses and implements nursing interven-	_	Gives leadership on research/evidence in
	tions to prevent, maintain or alleviate.		practice and innovative practices to improve
_	Utilises assessment information, research		healthcare services.
	and theoretical knowledge to design, im-	_	Develops, plans and directs programmes of
	plement and evaluate nursing interven-		care for individuals, families and communi-
	tions that include delegated treatments		ties.
	prescribed by medical practitioners.	_	Evaluates patient outcomes and cost-effec-
_	Prescribes or directs relevant therapeutic		tiveness of care.
	interventions.	_	Serves as a leader of a multidisciplinary
			team attending to patient matters.

A nurse specialist, applied to this study and context, refers to a nurse who has successfully completed a postgraduate diploma in occupational health nursing or oncology and palliative care nursing and provides specialist nursing practice in these areas of expertise (SANC 2012, 1).

1.5.2 Education module

An education module an organised collection of learning content within a learning programme that is presented as a unit of content or methods. The unit has a specific focus, purpose, teaching and learning strategy, curriculum mapping and assessment strategy, and leads toward achieving the requirements of the specific learning programme. A module is explained using a written document referred to as a module descriptor, which outlines the details of the module such as the level, credits and scope of the content included. It is the document that guides the level and implementation details of the module within a specific learning programme (University College Dublin n.d, 1).

1.5.3 Nurse entrepreneur or intrapreneur

For the purpose of this study, a nurse entrepreneur is an independent practitioner who is registered with the SANC as a professional nurse (Nursing Act) and is described as a business owner who provides direct services to clients (Arnaert & al. 2018, 494). Furthermore, a nurse entrepreneur is viewed as innovative and able to develop new services and ideas of ways to use existing products (Jahani & al. 2018, 230). A nurse entrepreneur is

A proprietor of a business that offers nursing services of direct care, educational, research, administrator or consultative nature. The self-employed nurse is directly accountable to the client, to whom, or on behalf of whom, nursing services are provided. (ICN 2004, 3)

The nurse entrepreneur establishes, maintains, manages and assumes the risk of a business and provides services related to nursing care, education, research and counselling (ICN 2004, 3). An example would be starting a pain management clinic in an oncology unit or a crisis intervention service in a mental health service. Nurse intrapreneurs work in an

existing health setting, earning a salary. In this setting, they develop, promote and deliver innovative health or nursing programmes and projects (ICN 2004, 3).

In this study, references to nurse entrepreneurs also imply nurse intrapreneurs.

2 Review of literature

2.1 Introduction

Entrepreneurship education is a developing science that has seen an increase in research during the past few years. Research is clear that educating individuals to become entrepreneurs improves entrepreneurial mindsets and competencies, with entrepreneurs who have received formal training performing better than 'self-made' entrepreneurs (Wurthmann 2014, 691). Curricula in entrepreneurship and innovation are growing (van Ewijk, Oikkonen & Belghiti-Mahut 2020, 2). There is, however, limited consensus on the methods of entrepreneurship education that are most effective in promoting entrepreneurial efficacy and intention (Ratten & Jones 2021, 1). There is also no universal model, theoretical framework or best practice for entrepreneurship education (Silveyra, Herrero & Pérez 2020, 2; van Ewijk & al. 2020, 2).

The first section of this chapter will describe entrepreneurship education. The second section will describe the entrepreneurial mindset and competencies required by nurse specialists. The third section will outline a conceptual framework based on the literature on entrepreneurship education and entrepreneurship requirements by nurses that informed the development of an embedded entrepreneurship module in a clinical nursing specialist programme.

2.2 An argument for entrepreneurship education

Entrepreneurships plays a pivotal role in employability skills, youth employment (van Ewijk & al. 2020, 1), social development, social innovation (Horng & al. in press, 1), job creation and economic growth (Boahemaah & al. 2020, 124; Hulten & Tumunbayarova 2020, 1; van Ewijk & al. 2020, 1; Yang, Jin & Zhou 2018, 567). Given the pivotal role of entrepreneurship in economic and social development, entrepreneurship education has gained increased interest by policymakers and researchers as it has the potential to improve entrepreneurial efficacy and the intention to engage in entrepreneurial activities. Impact studies have, however, produced varied results their attempts to establish a significant relationship between entrepreneurial education and entrepreneurial intention (van Ewijk & al. 2020, 2). Various levels of impact have been measured, such as entrepreneurial interest and awareness, entrepreneurial knowledge and intentions, entrepreneurial, number of start-ups, survival of start-ups and economic and societal impact (Nabi, Linan, Fayolle, Krueger & Walmsley 2017, 279). Entrepreneurship pedagogy is critical in promoting students' entrepreneurial intention (Boahemaah & al. 2020, 138; van Ewijk & al. 2020, 2) and "igniting their entrepreneurial culture" (Boahemaah & al. 2020, 125), and moderates the effect of personal factors (e.g. attitude) among students in a positive direction. Entrepreneurial education further increases a person's knowledge and skills to start up a business

(Boahemaah & al. 2020, 138), entrepreneurial ability and the intention toward entrepreneurial action (Yang & al. 2018, 567).

2.3 Entrepreneurship pedagogy

Entrepreneurship pedagogy is classified based on various typologies, for example the paradigms they are based on or the teaching and learning models they apply. Entrepreneurial pedagogy is often described with reference to dichotomies, for example, passive versus active pedagogy, traditional versus non-traditional (experimental) methods or theoretical versus practical methods entrepreneurship programmes (van Ewijk & al. 2020, 2). Entrepreneurial education can be described with reference to the meta-theoretical assumptions (paradigms), theoretical assumptions (theories, models and conceptual frameworks) and methodological assumptions (the practice of entrepreneurial education). Entrepreneurship pedagogy will be discussed with reference to paradigms, models and conceptual frameworks, and the practice of entrepreneurial education (such as course design and assessment).

2.3.1 Entrepreneurial education paradigms and theories

According to van Ewijk & al. (2020, 2–3), entrepreneurship education falls within the constructivist paradigm of pedagogy. Within this paradigm, it is assumed that truth is subjectively constructed and that there are multiple truths, as there are multiple subjective realities. These truths are co-created or constructed in the collective learning encounter. As knowledge is constructed by students during the learning encounter, the learning is based on students' experiences in the world and the lecturer is a facilitator that guides the learning process (Daniel 2016, 216). Knowledge is therefore subjectively constructed and co-constructed. Constructivist approaches to learning focus on how learning takes place (process) rather than what learning takes place, which falls within the objectivist paradigm of learning (Robinson, Neergaard, Tanggaard & Krueger 2016, 5).

Objectivism underpins behaviourism and cognitive behaviourism in learning theories that focus on learning content. The learning theories associated with constructivism are social learning, situated learning and existential learning theories (Robinson & al. 2016, 5). These theories focus on promoting how students learn about entrepreneurship and therefore learn important skills to be used in identifying entrepreneurial opportunities, innovative ideas, developing a business and managing change in the entrepreneurial endeavour.

Based on the constructivist paradigm, Krueger (2009) proposes that entrepreneurship education should focus not on what the learner knows but rather on how the learner knows (cognitive changes). The educator as facilitator provides opportunities for the learner to develop knowledge structures rather than learning content. According to Krueger (2009,

38), these components are developed through critical development experiences created in entrepreneurship education, namely

- how students know (entrepreneurial mindsets and knowledge structures)
- what students know (competencies).

Robinson & al. (2016) provide a summary of the main learning theories and their use in entrepreneurship education, as outlined in table 2.

Table 2. Learning theories in entrepreneurial education (Robinson & al. 2016, 24)

	Cognitive behav-	Social learning	Situated learning	Existential learn-
	ioural theory	theory	theory	ing
Purpose	Learning of factsChanging behaviour	Enhancing self-efficacy	 Lived experiences Participating in a community of entrepreneurs. 	Triggering recallEncouraging reflection
Focus	 Content, skills Tools (e.g. business plans) Simulations 	Mastery of experiences (role models)	PlacementsInternships	Clinical experi- ences
Context	University setting	Simulated setting	Real-life setting	Memory triggering in the university setting
Methods	Reproduction	Role models	Participation, mentoring, reflection	Enactment/reflection

2.3.2 A competency-based approach to entrepreneurship education

Competencies are those attitudes, knowledge, capabilities and skills that individuals need and use to perform a specific task or job. Entrepreneurship competencies can therefore be defined as the attitudes, knowledge, capabilities and skills used by a person to create and manage a company (Silveyra & al. 2020, 2). Applied to this study, the entrepreneurial competencies of nurse specialists are the attitude, knowledge and skills the clinical nurse specialists use to create, develop and manage a company or independent business. Section 2.4 will discuss these required competencies.

Increased competency has the potential to improve a person's self-perception of the feasi-bility of starting a company, which in turn increases entrepreneurial intention. Within the science of entrepreneurial education, there is limited consensus about the most relevant competencies to include and the competencies that can be developed in the teaching and learning context. It is argued that certain entrepreneurial competencies cannot be taught as they may be inherent in the personality of the person, while others are on an unconscious level. The iceberg model synthesised by Silveyra & al. (2020, 2–3) proposes that that are three levels of competencies required by entrepreneurs, namely behavioural competencies, conscious competencies and unconscious competencies. These levels of competencies and their related factors are summarised in table 3.

Table 3. Iceberg model of entrepreneurial competencies (Silveyra & al. 2020)

Level	Factor	Description			
	Knowledge	Understanding of facts, principles and process			
Behavioural	Skills	Ability to perform a physical or a mental task			
Dellaviourai	Experience	Ability to transfer knowledge and skill from one task to			
		another (different contexts)			
	Values	Integration of self-image and social roles through			
		which the person evaluates the self and social func-			
		tion			
	Attitudes	Feelings or assertions for or against a certain topic			
Conscious	Abilities	Permanent features useful for performing a number of			
		tasks			
	Self-image	Perceptions and evaluation of the self			
	Social role	Perception of how the self fits into the expectations of			
		others			
	Personality	Fixed and enduring personal characteristics of a per-			
		son in various situations and interactions			
Unconscious	Beliefs	Attributes reflected in perceived desirability and feasi-			
Unconscious		bility			
	Motives	That which persons consistently consider to guide			
		their actions			

While some researchers (Borchers & Park 2010; Ndofirepi 2020) argue that personal characteristics (e.g. need for achievement, internal locus of control) can be modelled and therefore improved though education, others argue that these are inherent characteristics that cannot be taught, and that the focus should be on the behavioural competencies needed to develop entrepreneurial competencies (Silveyra & al. 2020, 4). Based on an analysis of the typologies of relevant and teachable competencies, Silveyra & al. (2020) developed the model of teachable competencies (M-TEC) summarised in table 4. Four competency types and nine typologies are presented with their descriptions. These typologies are focused only on the behavioural level of entrepreneurship competencies. The value of the M-TEC is that it provides a framework for the content development of curricula with the intention of developing entrepreneurship and the evaluation of self-perceived entrepreneurship competence (Silveyra & al. 2020).

Table 4. Model of teachable entrepreneurship competencies (M-TEC) (Silveyra & al. 2020)

Entrepreneuria	I competencies	Management and	business com-	Human resourc	e competencies	Interpersonal competencies		
		petencies						
Typology	Description	Typology	Description	Typology	Description	Typology	Description	
Identification of opportunities	 Exploration of the environment Identification of opportunities 	Strategic competencies	 Acquisition and development of resources Business plans; setting objectives 	Leadership and motivation	 Leadership skills Delegation skills Teamwork Motivation 	Social competence	 Interpersonal skills Consumer profile management Written communication Verbal com- 	
Evaluation of opportunities	Risk assessmentVision of the business	Management competencies	 Planning Operational business skills Financial and budgeting skills Marketing skills Technical skills 	Human resource management	 Recruitment Human resources Performance management Creation of a culture of cooperation and mutual trust 		munication Decision- making Negotiation skills Conflict res- olution Persuasion Political competence	
Exploration of opportunities	Idea generationProduct innovationValue creation	Previous knowledge and experience	Business experience Familiarity with the market					

In a systematic review by Nabi & al. (2016, 292), competency models of pedagogy were found to have an impact on entrepreneurial intention and actual start-ups, along with longer-term impact on business for up to a year after the programme. Nabi & al. (2016, 292 state that "more experiential pedagogies seem to have to most potential to have impact at higher levels because students focus on developing behavioural competencies in solving problems in real – life entrepreneurial situations." Based on the indexes of three contextual textbooks commonly prescribed to students in business management and entrepreneurship programmes, three main themes were identified, namely (i) steps in setting up a business, (ii) business management and (iii) entrepreneurial competencies. The categories identified in each are listed in table 5.

Table 5. Textbook themes and topics (Nieuwenhuizen 2015, 2019; Strydom 2012)

Steps in setting up a busi-	Business management	Entrepreneurial competen-		
ness		cies		
 Overview of business concepts Identification and development of business ideas 	 General management Financial management Marketing function Operations management 	 Motivation Goal-setting Time management Assertiveness 		
 Viability of business ideas Business plan Finances (capital requirements, break-even point, budgets) Legislation and procedures in setting up a business 	 Purchasing function Human resources function Information management Public relations 	 Networking Leading Creativity and problem-solving Innovation Confrontation and conflict 		

2.3.3 Mindsets focused entrepreneurial education models

Van Ewijk & al. (2020, 5) propose that entrepreneurship course designs should be focused on developing both entrepreneurial skillsets and attitudes. According to Hulten and Tumunbayarova (2020, 3), an entrepreneurial mindset influences whether people choose to practise and develop their entrepreneurial knowledge and skills. In order to enhance entrepreneurial awareness and mindset, entrepreneurship education should be studentcentred rather than education-centred. Welsh, Tullar and Nemati (2016, 132) state that entrepreneurship education cannot only focus on competencies but should also focus on resilience, attitudes, motives and intentions. In order to facilitate the learning of novice entrepreneurs to "think like an entrepreneur", the teaching and learning models should move away from behaviourism and should rather focus on entrepreneurial mindsets, described by Krueger (2009) as knowledge structures. To alter and develop learners' deep beliefs, they need to be exposed not only to entrepreneurial competencies as curriculum content but also to critical developmental and growth experiences. Robinson & al. (2016, 18) argue that "it is therefore necessary to stimulate and trigger the pre-conceptual, non-cognitive forces in human development and the 'creative self' before moving on to develop a business."

An entrepreneurial mindset should be growth-oriented, flexible, dynamic and self-regulating (Hulten & Tumunbayarova 2020, 2). Daniel (2016, 216) proposes that the entrepreneurial mindset can be learned and is associated with a person's personal development. In order to develop such a mindset, lecturers should be facilitators who create opportunities for experimentation, creativity, collaboration and autonomous functioning.

The activities and methods to enhance the development of entrepreneurial mindsets and competencies include case studies, developing business plans, visiting lecturers, discussions, group exercises, excursions, simulations and internships (van Ewijk & al. 2020, 4). Hulten and Tumunbayarova (2020, 10) propose that playful exercises and challenges should be used that challenge students to move out of their "mental comfort zone." These activities should enhance students' problem-solving and decision-making abilities. In order to foster entrepreneurial attitudes, a project-based learning methodology using the design thinking process has been recommended (Horng & al. in press, 3). Further mentoring is central to the process of developing entrepreneurial competencies and attitudes through interaction (Horng & al. in press, 3). Students should be involved in real-life case studies and interaction with stakeholders who are external to the learning environment (van Ewijk & al. 2020, 5).

Assessment should not be done only on the end product (Daniel 2016, 216), for example the business plan, but also on the process and the learning and development that take place during this process. Robinson & al. (2016, 18) and van Ewijk & al. (2020, 5) propose that reflective assessment, peer assessment, interviews, simulations and diaries should be used. Self-reflection is important and can be included and assessed in portfolios (van Ewijk & al. 2020, 5).

2.4 Entrepreneurial competencies required by the clinical nurse specialist

Required entrepreneurial competencies will be discussed in terms of international and national perspectives and requirements, and competencies needed by nurse entrepreneurs.

2.4.1 International and national views and requirements

The ICN (2020, 13) proposes that nurse specialists be graduate trained to a master's degree level at a minimum, with the acknowledgement that there may be national variations. In South Africa, clinical nurse specialists obtain a postgraduate diploma as prescribed by the SANC. The ICN (2020, 14), proposes that, at the least, the specialist nursing educational programme must prepare nurses to

- think critically and abstractly at an advanced level
- teach and support other nurses and healthcare professionals in complex clinical situations
- use and integrate research into clinical practice.

Based on the National Qualification Framework Act 67/2008, a postgraduate diploma should comprise a minimum of 120 credits (1200 notional hours) over a minimum period of one year. Credits indicate the amount of learning contained in a qualification or a module, with one credit equal to 10 notional learning hours (SANC 2013, 1). The purpose of a postgraduate diploma is to strengthen a person's knowledge in a specific discipline or profession. The qualification is focused on working professionals and enables them to use advanced reflection and development in their area of specialisation. It demands a high level of theoretical commitment and intellectual independence, and requires students to write up a research report (Department of Education 2007, 26). The level descriptors outline the learning that has to be achieved at a specific National Qualification Framework (NQF) level. The generic level of descriptors for the NQF level 8 programme indicates levels of engagement with knowledge, information and systems that are on a higher cognitive order. The level descriptors for an NQF level 8 qualification, extracted from the NQF, are attached as appendix 2 (South African Qualifications Authority 2012, 10–11).

The minimum requirements for the education and training of a student leading to registration as a nurse specialist or midwife specialist are outlined in Regulation 635 of the Nursing Act (Department of Health 2020). The regulation outlines the admission requirements, programme requirements, requirements for registration in the category of nurse or midwife specialist, exit-level outcomes (ELOs), assessment and moderation, and recognition of prior learning. There requirements have to be met in the design and implementation of the programme by an NEI.

2.4.2 Competencies needed by nurse entrepreneurs

Based on an integrative literature review conducted by Arnaert & al. (2018, 494–501), the educational gaps in nurses' entrepreneurial skillsets are related to cognitive skills, interpersonal skills, business skills and strategic skills, as summarised in table 6.

Table 6. Entrepreneurial skillset for nurses (Arnaert & al. 2018, 494–501; Jahani & al. 2018, 230)

Cognitive skills		Interpersonal skills		Business skills			Strategic skills
_	Self-regulation	_	Networking	_	Mitigating and	_	Knowing how to
_	Professional	_	Selling one's ser-		managing risk		start a business
	know-how		vices	_	Marketing	_	Identifying entre-
_	Grasping the	_	Dealing with con-	_	Financial man-		preneurial oppor-
	larger context		textual resistance		agement		tunities
		_	Communicating	_	Operations man-		
			clearly		agement		

Identification of entrepreneurial opportunities should not be limited to the hospital or primary healthcare setting. It could include other sectors of care, education, counselling, rehabilitation, health tourism and publishing (Jahani & al. 2018, 235).

Vannucci and Weinstein (2017, 61) explored what nurse entrepreneurs viewed as critical business skills needed for success. The specific skills that were indicated as required were finance and business skills, clinical and speciality knowledge, design and creative skills, and legal knowledge. According to the ICN (2004, 24), nurse entrepreneurs need to have the following professional competencies: communication, negotiation, marketing, time management, public relationships, insurance, finances, accounting and tax matters, and legal frameworks.

3 Project design and implementation

3.1 Introduction

In this chapter, the process of developing an embedded entrepreneurship module in a clinical nursing specialist programme will be explained by firstly describing the context, then discussing the project plan and implementation. The three phases of the project design will be outlined and data for each step will be included.

3.2 Context

The context wherein the embedded entrepreneurship module was developed will be outlined with reference to the target organisation and regulatory frameworks in which it was developed.

The *target organisation* was a nursing school at a university. The nursing school currently has 18 staff members (fulltime and part-time) and an average of 400 registered students in undergraduate and postgraduate programmes. The two postgraduate diploma programmes will be offered from January 2022 with a combined intake of 110 students per year. The students enrolling in these two postgraduate programmes will be professional nurses who intend to become clinical nurse specialists in their respective areas of specialisation. The two specialisation areas are occupational health nursing and oncology and palliative care nursing.

Programmes offered at higher education institutions in South Africa are regulated and accredited by the CHE (Department of Education 2007, 6). In addition, some qualifications are designed in consultation with professional bodies that are responsible for recognising the programme and licensure (Department of Education 2007, 24). In the case of nursing, the professional regulatory body is the SANC. As set out in the Higher Education Act, postgraduate diplomas consist of 120 credits (1200 notional hours). This time includes instructional learning, self-directed learning and assessment. Further ELOs are set for postgraduate diplomas at NQF level 8. The Nursing Act and its regulations further guide the requirements a postgraduate diploma in nursing should achieve, with further specification of ELOs and specific allocation of credits to groupings of ELOs, namely core ELOs and specialist ELOs. Attributes of the nurse or midwife specialist that have to be developed in the programme are leadership, good interpersonal skills, emotional intelligence, critical thinking, the ability to articulate ideas, negotiation, advocating and scholarship (SANC n.d., 2).

The core ELOs pertain to generic outcomes across various nursing specialities, such as research and management competencies. The specialist competencies are aligned to a specific field of specialisation in nursing, for example midwifery, psychiatry, occupational

health and oncology. The development of modules should therefore be aligned with these ELOs and credits (refer to appendix 1 for an outline of the ELOs). The core ELOs applicable in the development of this embedded entrepreneurship module are as follows (Regulation 635, Department of Health 2020, 5–6):

- The nurse specialist engages in planning, commissioning and managing a specialist unit, an educational entity or a health service.
- The nurse specialist utilises, manages and communicates data to support decisionmaking and research.
- The nurse specialist appraises and develops him- or herself, peers and nurse/midwife specialist students by facilitating self-directedness/leadership and lifelong learning to maintain competence.

Based on the curriculum framework requirement for this programme outlined by the SANC (n.d), the number of credits that may be allocated to the core ELOs is 30 credits, which amounts to 300 hours as the credit rating system rates 10 notional hours as equivalent to 1 credit. There are therefore limited credits that can be allocated to the embedded module on entrepreneurship for clinical nurse specialists, which restricts the scope of the module and the implementation processes that can be utilised in facilitation of learning. Based on the ELOs and available credits, the nursing school designed the modules for each of the postgraduate diplomas against the backdrop of the NQF and the Department of Health (2020) as outlined in figure 1.

Postgraduate diploma in och health nursing	ccupational		Postgraduate diploma in oncology and palliative care nursing			
Specialist ELOs	Core	ELOs	Specialist ELOs			
900 hours (90 credits)	300 hours ((30 credits)	900 hours (90 credits)			
Specialist modules 1. Occupational health (240 hours, 24 credits) 2. Quality in occupational health nursing (240 hours, 24 credits) 3. Occupational health nursing (420 hours, 42 credits)	dence-base	12 credits) ch for evi-	Specialist modules 1. Oncology nursing principles and practical (420 hours, 42 credits) 2. Quality in oncology and palliative care nursing (240 hours, 24 credits) 3. Navigating the patient with cancer (240 hours, 24 credits)			

Figure 1. Regulatory framework with embedded modules

From figure 1, it can be concluded that the 30 core ELO credits are shared by the two postgraduate diplomas. These modules are (i) business management and entrepreneurship and (ii) research for evidence-based practice. Each of the two programmes has its specific nursing speciality-related modules based on the prescribed specialist ELOs (refer to appendix 1). In order to develop the module business management and entrepreneurship module, the project plan described in the next section was designed and implemented.

3.3 Project plan

Based on the three objectives of the study, the project was planned in three phases with key activities in each phase as indicated in table 7.

Table 7. Phases of the curriculum development and evaluation process

Steps	Sources and activities				
hase 1: Data gatherin	g and consultation				
Literature review	 Entrepreneurship education literature (chapter 2) Competencies required by nurse entrepreneurship literature (chapter 2) 				
Expert consultation	 Subject specialist in entrepreneurship and business practice Subject specialists in occupational health and oncology nursing Curriculum design specialist 				
Phase 2: Module development					
Conceptual frame- work development	Based on data obtained in phase 1				
Module mapping and design outline	 Framework for curriculum development by the SANC Conceptual framework 				
Module descriptor design	 Module mapping Conceptual framework University-developed structure for a module descriptor 				
Phase 3: Module	e evaluation				
Curriculum design practitioner Department of quality promotion	Evaluation by a curriculum design practitioner Evaluation by the department of quality promotion				
	Phase 2: Module Conceptual framework development Module mapping and design outline Module descriptor design Phase 3: Module Curriculum design practitioner Department of qual-				

Phase 1 explored the content and the education process to be included in the entrepreneurship module. Two steps were implemented, namely a literature review and expert consultation. Phase 2 was the development of the module that was done in three steps, namely the development of a conceptual framework, module mapping and design outline, and development of the module descriptor. Finally, phase 3 entailed the evaluation of the module by the curriculum design practitioner and the university's department of quality promotion.

3.4 Project implementation of phase 1: data gathering and consultation

A *literature review* was conducted as presented in chapter 2, with a focus on the content and facilitation process that would influence the development of entrepreneurship competency and intention. From the literature review, it can be concluded that there are close links between entrepreneurial competencies and leadership and management competencies. Certain competencies should be included in the content of the embedded entrepreneurship module. Both entrepreneurial competencies and managerial competencies are required, with the latter becoming more important as a business grows (Mitchelmore & Rowley 2010, 104–105). The way of offering the module, however, affects the development of the softer skills and the mindset required by the entrepreneur. In summary, the competencies presented in table 8 should be addressed in a module for clinical nurse

specialists to develop their entrepreneurial competencies. They have been compiled based on the M-TEC model (Silveyra & al. 2020), entrepreneurial skillset for nurses (Arnaert & al. 2018, 494–501; Jahani & al. 2018, 230) and the ICN (2004).

Table 8. Summary of entrepreneurship competencies (adapted from Arnaert & al. 2018, 494–501; ICN 2004; Jahani & al. 2018, 230; Silveyra & al. 2020)

Entrepre- neurial com- petencies	Management and busi- ness compe- tencies	Strategic competen- cies	Interper- sonal com- petencies	Leadership competen- cies	Professional competen-cies
 Entrepreneurial opportunities (identification, evaluation, exploration) Starting up a business 	 Planning Operational business skills Financial and budgeting skills Marketing skills Human resource competencies Technical skills 	 Acquisition and development of resources Business plans; setting objectives 	 Interpersonal skills Consumer profile management Written communication Verbal communication Decisionmaking Negotiation skills Conflict resolution Persuasion Political competence 	 Leadership skills Delegation skills Teamwork Motivation 	- Technical skills - Legal frameworks

In addition, the delivery of the programme should be student-led and focused on active participation, role-modelling and reflective practice.

Expert consultation entailed one individual and two consultative online group meetings with four persons, followed by individual discussions. The experts included one curriculum development practitioner, a subject expert in business management and entrepreneurship, a subject expert in occupational health nursing and a subject expert in oncology and palliative care nursing. The discussions during the meetings were are follows:

Session 1:

This was an individual session with the subject specialist in business management and entrepreneurship. The objective of the session was to introduce the module and the focus of the working sessions, namely to determine the content and process of an entrepreneurship module for nurse specialists. Resource sharing took place, and the team was referred to current sources on business management and entrepreneurship. In addition, examples of other modules developed for other programmes in the university were shared

with the team members. Members were requested to familiarise themselves with the literature and draft a basic structure that, in their view, would include the relevant content for such an embedded module.

Session 2:

This was a group session where the background was provided to the experts and their views on the approach to such a programme were discussed. Other embedded business management and entrepreneurial modules offered in related fields such as somatic therapy and animal sciences were discussed. The consensus was that 12 credits limited the time students could spend on the module; therefore, key competencies had to be addressed. Experts agreed that the module had to be applied to the context and the specific nursing programmes being taught, rather than a separate "theoretical" subject about business management and entrepreneurship. This could be achieved through the development of outcomes and assessment criteria for the embedded module on business management and entrepreneurship that are applied to the nurse specialist and through applied continuous assessments. The nursing experts were given access to the tables of content of the books (Nieuwenhuizen, 2015; Nieuwenhuizen, C. 2019; Strydom, J. 2012).

Members would consider the competencies based on the sources and content and provide feedback in terms of their views of what structure the module should have.

Session 3:

Feedback session. Experts presented their views on the content and approaches to follow. The nursing experts used the ELOs as guidelines to group the themes of the modules according to the verbs in the ELOs, specifically those which state that "the nurse specialist engages in *planning, commissioning* and *managing* a specialist unit, an educational entity or a health service" and that "the nurse specialist appraises and develops him- or herself, peers and nurse/midwife specialist students by *facilitating self-directedness/leadership* and lifelong learning to maintain competence". There was also a sense that practical activities had to be included in the module, such as creativity exercises and the development of a small project. A summary of the themes and related topics that the experts suggested to be included in the module are summarised in table 9.

Table 9. Summary of themes from the expert discussions

	Planning		Commissioning		Managing		Leading
_	The nurse as	-	Setting up a busi-	-	General manage-	-	Self-appraisal
	manager, leader		ness		ment		and development
	and entrepreneur	_	Budgeting	_	Financial function		as a leader, man-
	within the	_	Human resources	_	Marketing func-		ager and entre-
	healthcare system	_	Information man-		tion		preneur
-	Basic business		agement	_	Operations man-	_	Self-confidence
	concepts and				agement		and positive atti-
	business environ-			_	Purchasing func-		tude
	ment				tion	_	Goal-setting
_	Identification of			_	Human resources	_	Assertiveness
	feasible business			_	Information man-	_	Time manage-
	ideas				agement		ment
_	Viability of busi-			_	Public relations	_	Networking
	ness ideas					_	Confrontation and
_	Drawing up a						conflict
	business plan						

3.5 Project implementation of phase 2: module development

The module development entailed two steps, namely developing a conceptual framework and designing a module descriptor. With the input of all sources of information in phase 1, a *conceptual framework* was developed that served as a foundation for the module content and process of facilitation of the embedded business management and entrepreneurship module. The conceptual framework is depicted in figure 2.

The conceptual framework visually depicts the embedded nature of the business management and entrepreneurship module in the postgraduate diploma nursing programme. The process of facilitation to enhance an entrepreneurial mindset is depicted by the outer dark blue rectangle, implying that the process of facilitation is not only required for the specific module but should be done for all modules (the entire programme), as business practice and entrepreneurial abilities are not disengaged from the technical competencies required of a nurse specialist entrepreneur. Facilitation should include active participation and experimentation, reflection on learning and practice, role-modelling, mentoring and continues assessment.

At the centre of the conceptual framework, the nursing speciality is depicted in a light blue rectangle. This is aligned with the maximum credits allocated to the nursing speciality ELOs, namely 90 of the 120 total programme credits. Technical competencies have been identified in the literature as important for entrepreneurs. These competencies, based on the ELOs, include

- technical know-how of the specific area of speciality
- knowledge of legislation and ethical frameworks for practice
- interdisciplinary collaboration
- self-development and continuous learning
- quality assurance
- policy development.

There is an overlap between the content addressed in the speciality ELOs, implying that competencies such as teamwork, networking, communication and quality assurance processes are not only taught in the embedded module described, but rather in an integrated manner. In the centre of the nursing speciality is the embedded module in business management and entrepreneurship. The content depicted in four main themes was derived from the information gathered in phase 1. Due to the limited credits (12 credits), themes mentioned more often in the literature and by the experts were prioritised. The structure selected was based on the experts' suggestion to focus on the verbs of the specific ELOs, namely commissioning, planning, managing and leading. These four concepts were the main themes for the developed module. Within each theme, categories were listed that became the units addressed in the module. It is important to notice that there are overlaps; for example, financial management is not only important during the commissioning process but also in the planning and managing process. Therefore, the circular arrows in the centre of the figure imply that the themes and their categories are not linear and exclusive, but integrated.

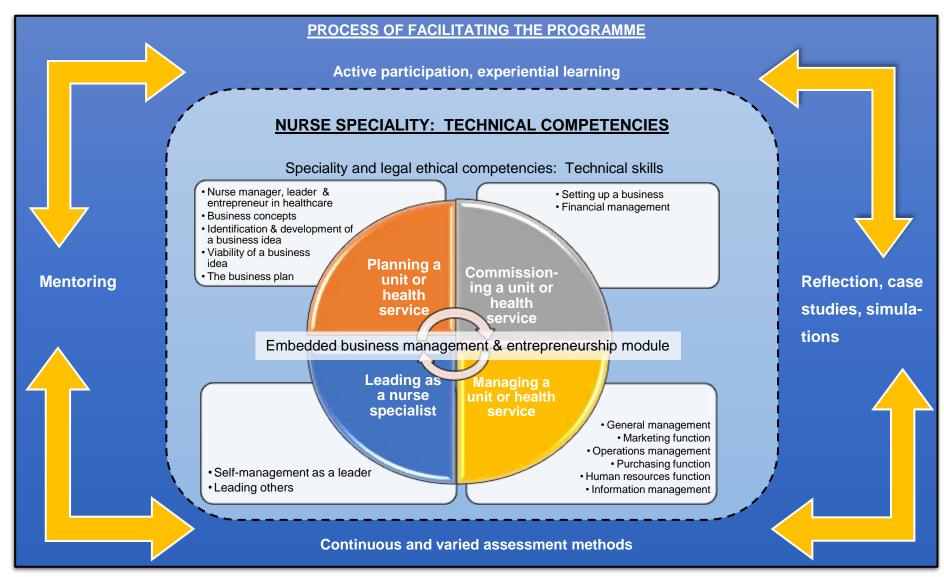


Figure 2. A conceptual framework for an embedded business management and entrepreneurship module for nurse specialists

Curriculum mapping is the process for recording what content and skills are actually taught in a classroom during a longer period of time, which can set as both an instrument and a procedure for determining what the curriculum is and for monitoring the planned curriculum (SANC 2013, 2).

Module mapping was conducted using an Excel spreadsheet, where the SANC-specified ELOs, units, subunits, theoretical activities, practical activities, credits and assessments were aligned with the 12 credits or 120 notional hours. The total programme mapping was done to ensure that the requirements set out by the SANC were met. The total mapping influenced the number of credits in the specific programme and the ratio of theory to practical credits that had to be achieved. According to the requirements of the total programme mapping, 50% of the credits for the 120-hour (12-credit) business management and entrepreneurship module had to be for theory and 50% for practical. This aligned well with the active participatory and experiential approach suggested in entrepreneurial education literature. Table 10 evidences how the content, credits, theoretical and practical components of the module were mapped.

Based on the module map and design outline, the content from the conceptual framework and the university's required structure for a module descriptor, the module was designed as described in chapter 4 and attached as appendix 3.

Table 10. Module mapping and design outline

	BUSINESS MANAGEMENT & ENTREPRENEURSHIP TOTAL TIME 120 hours									
			Theory		Practica	(\$				
	Description of learning unit	Instructional time (hours)	Independent study time (hours)	Total hours	Practical assign- ments/ assessment time (hours)	Total time in (hours)				
1	Planning a specialist unit or health service	12	3	15	20	35				
2	Commissioning a health service or unit	12	3	15	18	33				
Managing a specialist unit or health service		18	3	21	18	39				
4	Leading as a nurse specialist	6	3	9	4	13				
	Total hours	48	12	60	60	120				
P	ercentage of the total (120) hours	40%	10%	50%	50%	100%				

3.6 Project implementation of phase 3: module evaluation

Formative module evaluation was done internally prior to the external evaluation required by the CHE and the SANC. The internal evaluation is usually conducted by the faculty or staff of a higher education institution. The internal evaluators have in-depth knowledge about the context and requirements related to the programme and module. The evaluation was done formatively as the intention was to improve the module in the development phase (Science Education Resource Centre at Carleton College 2020). The module on business management and entrepreneurship was evaluated with reference to the following criteria:

- Is the module aligned with the NQF and CHE requirements for a programme at NQF level 8?
- Does the module meet the requirements set out in the Nursing Act and related SANC guidelines?
- Is the module descriptor technically correct by meeting all the requirements for inclusion and evaluation by the regulatory bodies?
- Does the module add value to the learning experience of the student studying toward a nursing specialisation?

The module was initially evaluated by the curriculum design practitioner of the university. Comments to attend to were

- alignment of credits within the units and the total credits
- alignment of the discussion of the teaching and learning strategies with the content of the units
- evaluation and alignment of assessment with the policy on assessment and moderation by the university.

These corrections were attended to and implemented in the module descriptor.

Thereafter, the total postgraduate diploma in occupational health nursing was submitted to the university's department of quality promotion, and the total programme, including the module on business management and entrepreneurship, was evaluated. The following comments were received:

- Alignment of the module name with the discussion in the larger programme was recommended.
- Admission requirements in the module needed to be aligned with those in the total programme.
- ELOs in the module needed to be aligned with the total programme document recommended.
- Clarification was sought on the practical and theoretical credits and their alignment with the ELOs.
- A typographical error in the assessment percentages needed correction.

These corrections were attended to and implemented in the module descriptor.

4 Product description

4.1 Introduction

This chapter outlines the descriptor that was designed based on the guideline documents, module map and conceptual framework. An overview to the module will be described. The detailed module descriptor is attached as appendix 3.

4.2 Module descriptor structure

The 12-credit module in business management and entrepreneurship is offered at NQF level 8 in blocks, using a contact mode. Being offered at NQF level 8 implies a possibility for vertical articulation with an NQF level 9 qualification, such as a master of nursing degree, or another NQF level 8 qualification, which would imply another postgraduate diploma in nursing programme. The module is offered over one year fulltime or two years part-time.

Admission requirements are specified in Regulation 635 (Department of Health 2020, 5–6) of the Nursing Act, namely that the applicant must

- be a registered professional nurse or a general nurse with a midwifery qualification and must maintain such registration for the duration of the programme
- have two years' post-basic nursing experience.

The admission requirements as stated in the module descriptor for business management and entrepreneurship are as follows:

"A basic NQF Level 7 Bachelor's Degree or Advanced Diploma in Nursing from a South African university or nursing college, or any registered higher education institution and who is registered with the South African Nursing Council as Professional nurse or a General Nurse with a Midwifery qualification. Employment in a clinical environment and at least two years of clinical experience after completion of basic qualification is a requirement."

A *purpose statement* is included in the module descriptor to indicate the scope of the module, the content and skills covered in the module and the learning experiences that are provided. The purpose statement of a module further outlines the way in which future opportunities are created by completion of the module and to provide an accurate introduction to what the module entails in a specific and precise manner (Northern Arizona University 2021, 1). The purpose statement of the module for business management and entrepreneurship is as follows:

"The module in business management entrepreneurship has 12 credits that include both theory and practical components. The module is on NQF level 8 which prepares the student to apply business management and entrepreneurial competencies to planning, commissioning, managing and leading in a specialist unit or health service. The student will be able to apply his/her knowledge of identifying a feasible and viable business ideas, develop a business plan, setting up a business, performing various management functions, self – management and management of others."

ELOs are specified for the module. ELOs are generically stated and indicate the exit level of accomplishment against which a student completing the qualification (or in this case, the module) is assessed (Department of Health 2020, 2). The ELOs further indicate the level of performance that a student must achieve when exiting a programme. In this case, the ELOs are specified by the Department of Health (2020, 8–10). Exit level outcomes are grouped in Regulation 635 of the Nursing Act into core and specialist outcomes (Department of Health 2020). These ELOs and their associated assessment criteria are outlined in appendix 1. For the module on business management and entrepreneurship, three of the core ELOs are addressed, namely:

The nurse specialist:

- Engages in planning, commissioning and managing a specialist unit, an educational entity or a health service.
- Utilises, manages and communicates data to support decision-making and research.
- Appraises and develops self, peers and nurse/midwife specialist students by facilitating self-directedness/leadership and lifelong learning to maintain competence.

In order to achieve the specified ELOs, module-specific outcomes were developed. Module outcomes are stated in the module descriptor for all of the units with their subunits. Four learning units with subunits were developed based on the module mapping and design outline provided in table 10. Verbs used in the module outcomes were formulated at NQF level 8, as outlined in the level descriptors of the NQF, by requiring students to apply, demonstrate, develop and analyse. The module outcomes, units and credits allocated for the units are indicated in table 11.

Table 11. Summary of units, module outcomes and subunits

Unit	Module outcomes	Subunits
	Analyse the role of the nurse specialist	
Unit 1: Learning unit 1: Planning a specialist unit or health service (35 hours)	 as manager, leader and entrepreneur in the healthcare system. Demonstrate an understanding of business and entrepreneurial concepts. Apply business concepts and business environment to health service. Develop and refine a business idea for a specialist unit or health service. Analyse and apply calculations to determine the viability of a business idea. Develop a business plan for an identified healthcare service or specialist unit. 	 Unit 1.1: The nurse as manager, leader and entrepreneur within the healthcare system Unit 1.2: Business concepts and business environment Unit 1.3: Identification and development of a business idea Unit 1.4: Viability of a business idea Unit 1.5: The business plan
r Unit 2: Commission- ing a health service or specialist unit (33 hours)	 Apply the steps of setting up a business to an identified specialist unit or healthcare service. Demonstrate an understanding of the financial management function when managing a specialist unit of health service. Demonstrate the ability to compile and analyse a budget, income statement and balance statement. Apply the general managerial compe- 	 Unit 2.1 Setting up a business Unit 2.2 Financial management
Unit 3: Managing a health service or specialist unit (39 hours)	tencies to a specialist unit or health service. Apply the marketing function and competencies in formulating a marketing plan in setting up and managing a specialist unit or health service. Apply operations management to a specialist unit or health service. Apply the purchasing function to a specialist unit or health service. Apply the human resource function to a specialist unit or health service. Apply knowledge of information management to a specialist unit or health service.	 Unit 3.1: General management Unit 3.2: Marketing function Unit 3.3: Operations management Unit 3.4: Purchasing function Unit 3.5: Human resources function Unit 3.6: Information management
Unit 4: Leading as a nurse specialist (13 hours)	 Demonstrate effective time management skills. Demonstrate assertive communication during interaction with others in the work environment. Demonstrate understanding of the importance of networking as the leader of a team. Demonstrate understanding of effective leadership styles and how to improve them. Apply the principles of effective conflict management in the workplace. 	 Unit 4.1: Self-management as a leader Unit 4.2: Leading others

4.2.1 Pass requirements

The pass requirement for the module is indicated as 50%, in alignment with university requirements. The next section will outline the detail of the assessments leading toward this achievement.

4.3 Instructional and assessment methodology

Of the 120 notional hours, 50% are allocated to theoretical learning (instruction and independent study) and 50% to practical learning. This is based on the module mapping and outline conducted in phase 1 of the study (table 10). The instructional methodology included throughout each of the units is a blended learning approach, implying online and contact learning. Multiple methods are included within this blended approach, such as independent study, core lectures, class presentations and discussions, assignments, case study discussions, and practical assignments. These methods are aligned with the recommendations in the literature, as explained in chapter 2, and the conceptual framework.

Assessment is the planned process for evidencing and making conclusions about a student's performance in relation to the prescribed outcomes of a programme (Department of Health 2020, 21). In this case, the outcomes and assessment criteria of each unit of the module will be used to conclude whether students are evidencing the required performance. Assessments are done formatively and summatively. Formative assessment is continuous and aimed at improving the students' competence and the method of delivery of teaching and learning, while summative assessment takes places at the end of a module with the intention of determining the students' achievement in relation to the overall outcomes of the programme. Moderation is a quality assurance process to ensure that the assessment principles are applied as prescribed (Department of Health 2020, 21–24) and that students demonstrate the required level of performance.

The business management and entrepreneurship module is non-examination terminating, implying that six practical continuous assessment activities requiring active participation, experimentation and reflection are implemented. Scaffolding of learning according to assessments takes place, with the presentation of a business plan as the final comprehensive and summative assessment. The final summative assessment reflects the students' overall competence and carries the most weight. The weightings and tools for assessment are described in detail in the module descriptor. The six planned assessments, topics and their weights are reflected in figure 3.



Figure 3. Non-examination terminating assessment

Figure 3 indicates the six continuous assessment topics and their weights, meaning the percentage that each assessment contributes to the final summative assessment. The viability determination, budgeting exercise and marketing activity each carries a weight of 10%. The business idea and information management activity each carries a weight of 15%, and the final summative assessment – the business plan – carries the most weight, namely 40%.

As the module is an exit-level module, it is moderated externally according to the university's policy on assessment and moderation. This implies that an assessor external to the university will moderate the module.

4.4 Conclusions and recommendations

An embedded module in business management and entrepreneurship was developed based on the prescribed regulatory frameworks, the conceptual framework of this study and university policies and guidelines. A limitation of the developed module is its limited time to fully develop entrepreneurial competencies and mindset, as the module ends in the development of a business plan and does not continue until actually setting up a business or a specific unit or health service.

The objectives of the study were achieved as follows:

- A situation analysis was done of the content and process to follow in developing and offering an entrepreneurship module by means of a literature review and expert consultation.
- An embedded business management and entrepreneurship module was developed after a conceptual framework had been developed and module mapping had been conducted.
- The module was evaluated internally by internal quality assurance staff and a curriculum practitioner in the university, and changes were made according to their recommendations.

It is recommended that, after external evaluation of the programme and the module by the regulating body, adaptations further be implemented. Once the module is implemented, student and lecturer feedback and evaluation should be incorporated into the module. A further recommendation would be to conduct an intervention study to determine the efficacy of the module in developing nurse specialists' business practice and entrepreneurial competencies and mindsets.

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APPENDICES

Appendix 1. Exit level outcomes and assessment criteria: postgraduate diploma in nursing

1. CORE EXIT LEVEL OUTCOMES						
Exit Level Outcomes	Associated Assessment Criteria					
1.1 Practices and facilitates specialist nursing or midwifery, nursing education or health services management within ethical-legal parameters of the profession.	 1.1 Personal attributes and behaviour demonstrates conformity to the relevant code of ethics in the practice of specialist nursing or midwifery, nursing education and health services management. 1.2 Critical decision making and moral reasoning models and principles are used to make clinical judgements and resolve ethical dilemmas within the specialist practice. 1.3 Accountability for own professional judgement, actions, outcomes of specialist care, nursing education or health services management provided and continued competence are demonstrated 1.4 The relevant current legislation, policies, regulations and guidelines pertaining to specialist practice or nursing education or Health Services Management are identified and applied. 1.5 All care activities are documented accurately, comprehensively and timeously taking into account the legal requirements for record keeping. 1.6 Demonstrate knowledge of the nurse specialist or midwife specialist role in the management of Professional misconduct and risks taking into consideration the institutional protocols, protocols and 					
1.2. Applies the knowledge of and facilitates evidence-based	ethical-legal framework. 2.1. Engagement in specialist practice, demonstrates understanding of and the process of evidence-based practice, 2.2. Application of evidence based specialist practice, nursing edu-					
practice, nursing educa- tion or management in the specialist field to solve contextual prob-	cation and health services management takes into consideration the appropriate methodology of gathering evidence for practice, education and management, for example, systematic or scoping reviews, and appraisal of articles, practice based-research and publication.					
lems and develop policies and guidelines.	2.3. Use of evidence based practice, nursing education and health service management demonstrates knowledge of and critical analysis of the various levels of evidence.					
1.3. Appraises and develops self, peers and nurse specialist students	3.1 Leadership skills are demonstrated through application of appropriate leadership styles, principles and theories of health services management.					
by facilitating self, direct- edness, leaders ship and lifelong learning to main- tain competence	3.2 Continuous Professional Development (CPD) for self and others is effectively facilitated for lifelong learning by creating a positive learning climate in the workplace through the processes of mentorship, preceptorship, supervision, performance appraisal, etc.					
	3.3 Engagement in performance appraisal demonstrates understanding of the purpose and processes of the performance management and development system.					
	3.4 Feedback gained from self-reflection, peers, students, management and other relevant stakeholders is utilised to improve effectiveness in the specialist role.					

1. CORE EXIT LEVEL OUTCOMES						
Exit Level Outcomes	Associated Assessment Criteria					
1.4. Facilitates advocacy for the profession and provision of specialist professional support for personnel, patient or client, families and communities.	 3.5 Demonstrates understanding of the various risk factors that impact on health and wellness within the workplace and applies strategies to care for self, peers, employees and students. 4.1 Demonstrates understanding of the purpose of the advocacy role for a nurse specialist or midwife specialist practice. 4.2 Advocacy principles are applied to ensure safe and quality care/in various healthcare settings or nursing education or health services management or. 4.3 Demonstrates use of appropriate communication skills and channels in facilitating advocacy. 					
	4.4 Demonstrate ability to lobby and or participation in interest groups to influence legislation and policy affecting the role performance.					
1.5. Engages in planning, commissioning and managing a specialist unit, an educational entity or a health service.	 5.1 Demonstrate understanding of levels and or classification of the respective specialist units, health services or educational entities. 5.2 Commissioning task takes into consideration the burden of diseases and priority services as determined by current events. 5.3 Participation in the evaluation of the existing specialist unit, 					
	health or education entity demonstrates knowledge of guidelines for provisioning a specialist unit/ health service or educational entity. 5.4 Engagement in planning and commissioning demonstrates understanding of the role and responsibilities in this task within the inter- and intra-professional team.					
6. Engages in scholarly activities to inform evidence-based practice, education or manage-	6.1 Practice in the respective specialisations demonstrates knowledge of appropriate search engines and data bases for review of literature to inform evidence based practice, nursing education and health services management.					
ment.	6.2 Appropriate methods are used to generate evidence for utilisation in specialist practice (e.g. research, systematic reviews etc.) education and health services management.					
	 6.3 Demonstrates awareness of the peer reviewed journals and use for sharing of evidence. 6.4 Activities in the specialist practice, education and health services management are based on scientifically proven evidence. 6.5 Actively participates in inter and intra-professional dialogues, 					
1.7. Utilises, manages and communicates data to support decision-making and research.	debates or discourses in quality improvement. 7.1 Documents all data/information gathered in the context of the specialist practice, education and health services for utilisation and storage in accordance with the set standards. 7.2 Demonstrate utilisation of comprehensive data, information and					
g	emerging evidence pertinent to the respective specialist practice. 7.3 Problem identification, diagnoses and opportunities for improvement are based on gathered and critically analysed assessment data from the patients/clients, families, communities, students or employees including current scientific evidence. 7.4 Documentation demonstrates respect for intellectual property					
	and is without plagiarism.					

2. SPECIALIST EXIT LEVEL OUTCOMES						
Exit Level Outcomes	Associated Assessment Criteria					
2.1. Renders and co-ordinates patient-centred	1.1 Demonstrates understanding of the position of own specialist service within the health care system.					
specialist nursing or mid- wifery practice within a	1.2 The nurse or midwife specialist is conversant with the full range of services within the specialist area of practice.					
continuum of care using the scientific approach,	1.3 Specialist care rendered integrates promotive, preventive, curative, rehabilitative and palliative care in a healthcare continuum.					
integrating biomedical and psychosocial sci-	1.4 Knowledge, skill and attitudes involves rendering specialist care is in accordance with national and international standards and pro-					
ences including ad-	tocols of the specialist field.					
vanced pharmacology.	1.5 Formulated nursing or midwifery diagnoses are congruent with the patient's/client's clinical manifestations/data, and are based on accurate analysis and interpretation of data obtained from scientific,					
	laboratory, diagnostic, technological and psycho-sociocultural assessment including consultation of relevant/current literature/evi-					
	dence.					
	1.6 Planned nursing or midwifery interventions are individualised considering patient's/client's needs, values, beliefs, preferences, culture and contextual variables, for example, disease burden, health risks, national priorities, etc.					
	, 100 miles (100 miles					
	1.7 Planned nursing or midwifery interventions are based on formulated nursing diagnoses, and application of specialised knowledge and skills (competencies) including advanced pharmacology in collaboration with the inter and intra-professional team.					
	1.8 Planned nursing or midwifery interventions are implemented					
	timeously, accurately, safely and effectively in accordance with set evidenced-based standards, guidelines, protocols, algorithms etc. specific for the specialist field.					
	1.9 Health care interventions are planned in collaboration with the patient or client, family and relevant members of the health care team.					
	1.10 Nursing interventions include preparation of patients/clients, families, and nurses in the lower level care for continued care in the					
	hospital and community in accordance with the health status and health literacy of the patient/client.					
	1.11 Nursing or midwifery interventions are documented and revised timeously and effectively based on critical analysis of the					
	monitoring and evaluation data and reaching a sound clinical judgement.					
2.2 Mobilises appropriate resources to implement	2.1 Demonstrates understanding of the infrastructure and equipment needed in the specific area of specialisation.					
standards of practice relevant to the area of spe-	2.2 Rendered care demonstrates ability to operate and monitor the equipment used in the specialist area.					
cialisation, to ensure quality patient care and	2.3 Sound asset management principles are employed to ensure appropriate, adequate, well maintained and up to date equipment.					
safety.	2.4 Assignment of staff to nursing care takes into consideration the specialist qualification and its competencies, experience, standard nurse patient ratios for the area of specialisation, job description and					
	skill mix.					

2. SPECIALIST EXIT LEVEL OUTCOMES						
Exit Level Outcomes	Associated Assessment Criteria					
2.3. Collaborates within the inter- and intra-professional team by engaging in health dialogue, shared leadership, decision making and sound clinical judgement.	3.1 Practice problems in the specialist area are identified, shared and collaboratively solved by informed decisions and sound clinical judgement 3.2 Consultation is sought and provided appropriately and timeously in the provision of holistic care in a healthcare continuum through awareness of one's competence.					
ciiriicai juugement.	 3.3 Patient referral is carried out appropriately and timeously as dictated by the patient's condition and in accordance with the referral guidelines. 3.4 Participation in the inter- and intraprofessional team is promoted, visible and recognised by the members of the team. 					
2.4. Participates in the design, development, implementation and evaluation and evaluation of the second sec	4.1 Participation in the development of policies, programmes and projects demonstrates understanding of the steps in and or levels of the development of policies, programmes and projects.					
tion of nursing policies, programmes and projects at provincial or national level.	 4.2 Participation in project and policy development demonstrates knowledge of own role and responsibilities within the inter- and intra-professional policy/project team. 4.3 Participation in policy development, programme and project de- 					
	velopment demonstrates advocacy for the nursing profession and patients/clients, families and communities in the specialist area. 4.4 Participation in project development includes appropriate com-					
	munication (negotiation, bargaining, assertiveness, persuasion, etc.). 4.5 Timely and adequate feedback to relevant stakeholders is pro-					
	vided as necessary.					
2. 5. Develops and implements institutional poli-	5.1 Demonstrates knowledge of the process and or steps of development of policies, standards, guidelines and protocols.					
cies, protocols, and guidelines in the area of specialisation, utilising	5.2 The process of development of policies, standards, protocols and guidelines involves the relevant and pre-determined stakeholders.					
the process of change management in improve-	5.3 The process of development and evaluation or testing of guidelines and protocols uses the appropriate methods.					
ment of quality of care.	5.4 Implementation of the new policies, protocols and guidelines to the specialist area demonstrates understanding and application of the change process.					
	5.5 Developed policies, protocols and guidelines are collaboratively revised at appropriate intervals and approved as per the institutional policy for the specialist area.					

Appendix 2. NQF 8 level descriptors

- a. Scope of knowledge, in respect of which a learner is able to demonstrate knowledge of and engagement in an area at the forefront of a field, discipline or practice; an understanding of the theories, research methodologies, methods and techniques relevant to the field, discipline or practice; and an understanding of how to apply such knowledge in a particular context.
- b. Knowledge literacy, in respect of which a learner is able to demonstrate the ability to interrogate multiple sources of knowledge in an area of specialisation and to evaluate knowledge and processes of knowledge production.
- c. Method and procedure, in respect of which a learner is able to demonstrate an understanding of the complexities and uncertainties of selecting, applying or transferring appropriate standard procedures, processes or techniques to unfamiliar problems in a specialised field, discipline or practice.
- d. Problem solving, in respect of which a learner is able to demonstrate the ability to use a range of specialised skills to identify, analyse and address complex or abstract problems drawing systematically on the body of knowledge and methods appropriate to a field, discipline or practice.
- e. Ethics and professional practice, in respect of which a learner is able to demonstrate the ability to identify and address ethical issues based on critical reflection on the suitability of different ethical value systems to specific contexts.
- f. Accessing, processing and managing information, in respect of which a learner is able to demonstrate the ability to critically review information gathering, synthesis of data, evaluation and management processes in specialised contexts in order to develop creative responses to problems and issues.
- g. Producing and communicating information, in respect of which a learner is able to demonstrate the ability to present and communicate academic, professional or occupational ideas and texts effectively to a range of audiences, offering creative insights, rigorous interpretations and solutions to problems and issues appropriate to the context.
- h. Context and systems, in respect of which a learner is able to demonstrate the ability to operate effectively within a system, or manage a system based on an understanding of the roles and relationships between elements within the system.
- i. Management of learning, in respect of which a learner is able to demonstrate the ability to apply, in a self-critical manner, learning strategies which effectively address his or her professional and ongoing learning needs and the professional and ongoing learning needs of others.
- j. Accountability, in respect of which a learner is able to demonstrate the ability to take full responsibility for his or her work, decision-making and use of resources, and full accountability for the decisions and actions of others where appropriate.

National Qualifications Authority. 2012 (8-10)

Appendix 3. Product: developed education module

Sections have been omitted as it contains intellectual property of the University

MODULE DESCRIPTOR

BUSINESS MANAGEMENT AND ENTREPRENEURSHIP

2021

Post Graduate Diploma in Occupational Health Nursing
Post graduate diploma Oncology and Palliative nursing

					1. 1	MODU	LE DATA							
1.1 HEQSF Pro- gramme Code				1.2 rning l ramme		Postgraduate Diploma in Occupational Health Nursing Postgraduate Diploma in Oncology and Pallia- tive Care Nursing								
1.3 Module Code	Si		Sub	1.4 Subject Name		Business Management and Entre- preneurship				NQF Level 8				
	Cor	Contact Distance 1.6			Crec	lits	1.7 Offered in:							
1.5 Offering Type	Y	es		12		Year	Year Semester Semester 2		Block					
Турс													(
1.8 Mod type:	ule			1.9	9 Serv	vice m	odule:				1.10	0 Offered by:		
	om- Elec- Module offered by the			Learn	ing Pr	Programme (SOLP) Yes								
X			Service Mo	dule	offered	d by O	thers (SSO)							
1.11 Basic competencies integrated in mod- ule			Yes	No	1.12 Pathway of programme				Yes	No				
Identify and	solve p	roblen	ns		Υ		Vocational							
Work effectively with others			Υ		Professional Y									
Organise and manage themselves				Υ		General								
Collect, analyse, organise and critically evaluate information			,	Υ		Other								
Communicate effectively				Υ		1.13 Admission requirements or pre-requisites						sites		
Use science and critically		chnolo	gy effectively	,	Υ									
Demonstrate an understanding of the world as a set of related systems				Y										
Utilise a variety of strategies to promote learning			Υ		A basic NQF Level 7 Bachelor's Degree or Advanced Diploma in Nursing from a South African university or nursing college, or any registered higher education institution and who is registered with the South African Nursing Council as Professional nurse. Employment in a clinical environment and at least two years of clinical experience after completion of basic qualification.						r Ad-			
Participate as a responsible citizen			Υ								frican			
Demonstrate medical ethical, -jurisdiction and sensitivity to human rights			Υ								stered			
Develop managing and entrepreneurial opportunities			Y											
1.14 Assessment			Yes											
Examination termination			N											
Non-examination termination				Υ										

Table 2: Purpose Statement and exit level outcomes

EXIT LEVEL OUTCOMES

Core

Engages in planning, commissioning and managing a specialist unit, an educational entity or a health service.

Associated assessment criteria:

- Demonstrate understanding of levels and or classification of the respective specialist units, health services or educational entities.
- Commissioning task takes into consideration the burden of diseases and priority services as determined by current events.
- Participation in the evaluation of the existing specialist unit, health or education entity demonstrates knowledge of guidelines for provisioning a specialist unit/ health service or educational entity.
- Engagement in planning and commissioning demonstrates understanding of the role and responsibilities in this task within the inter and intra-professional team.

Core

Utilises, manages and communicates data to support decision-making and research.

Associated assessment criteria:

2.1.1 ELO's

- Documents all data/information gathered in the context of the specialist practice, education and health services for utilisation and storage in accordance with the set stand-
- Demonstrate utilisation of comprehensive data, information and emerging evidence pertinent to the respective specialist practice.
- Problem identification, diagnoses and opportunities for improvement are based on gathered and critically analysed assessment data from the patients/clients, families, communities, students or employees including current scientific evidence.
- Documentation demonstrates respect for intellectual property and is without plagiarism.

Core

Appraises and develops self, peers and nurse/midwife specialist students by facilitating self-directedness / leadership and lifelong learning to maintain competence.

- Leadership skills are demonstrated through application of appropriate leadership styles, principles and theories of health services management.
- Continuous Professional Development (CPD) for self and others is effectively facilitated for lifelong learning by creating a positive learning climate in the workplace through the processes of mentorship, preceptorship, supervision, performance appraisal, etc.
- Feedback gained from self-reflection, peers, students, management and other relevant stakeholders is utilised to improve effectiveness in the specialist role

2.1.2 Knowledge, Skills and Applied Competency (KSAC)	2.1.3 Values, Attitudes and Expected Behavior	2.1.4 Basic Competencies				
 Communication skills (written, verbal and interpersonal) Management skills Listening skills Management skills Research implementation skills 	 Professionalism Ethical values and behaviour Self-discipline Curiosity Responsibility 	 Professionalism Ethical values and behave Self-discipline Curiosity Responsibility Reliability 				

- Analytical skills
- Evaluating skills
- Data analysis skills
- Problem solving skills
- Entrepreneurial skills
- Time management
- Reading skills
- Reasoning skills
- Critical and creative thinking skills
- Team-working skills
- Emergency support skills
- Computer skills

- Reliability
- Empathy
- Scientific thinking
- Independency
- Community Engagement (service learning)
- Critical thinking
- Innovation and creativity
- Empathy
- Scientific thinking
- Independency
- Community Engagement
- Sound judgement

2.1.5 Purpose statement

The module in business management has 12 credits that include both theory and practical components. The module is on NQF level 8 which prepares the student to apply business practice competencies to planning, commissioning, managing and leading in a specialist unit or health service. The student will be able to apply his/her knowledge of identifying a feasible and viable business ideas, develop a business plan, setting up a business, performing various management functions, self – management and management of others.

Module Outcome/s

Students must be able to:

- Analyse the role of the nurse specialist as manager, leader and entrepreneur in the healthcare system.
- Demonstrate an understanding of business and entrepreneurial concepts.
- Apply business concepts and business environment to health service.
- Develop and refine a business idea for a specialist unit or health service.
- Analyse and apply calculations to determine the viability of a business idea.
- Develop a business plan for an identified healthcare service or specialist unit.
- Apply the steps to setting up a business to an identified specialist unit or healthcare service.
- Demonstrate an understanding of the financial management function when managing a specialist unit of health service.
- Demonstrate the ability to compile and analyze a budget, income statement and balance statement.
- Apply the general managerial competencies in a specialist unit or health service.
- Apply the marketing function and competence in formulating a marketing plan in setting up and managing a specialist unit or health service.
- Apply operations management to the specialist unit or health service.
- Apply the purchasing function to a specialist unit or health service.
- Apply the human resource function to a specialist unit of health service.
- Apply knowledge of information management to the specialist unit or health service.
- Demonstrate effective time management skills
- Demonstrate assertive communication during interaction with others in the work environment.
- Demonstrate understanding of the importance of networking as a leader of a team.

- Demonstrate understanding of effective leadership styles and how to improve them.
- Apply the principles of effective conflict management in the workplace.

Pass requirements

A non-examination terminating assessment type will be used in this module that implies five summative assessments and a final integrated formative assessment in the form of continuous assessment. These assessments and their weightings are indicated in table 3.

Table 3: Assessments and weightings

ASSESSMENT	WEIGHT %
Practical assignment 1: The business idea	15%
Practical assignment 2: Viability of a business idea.	10%
Practical assignment 3: Budgeting	10%
Practical assignment 4: Marketing plan	10%
Practical assignment 5: Information management	15%
Integrated practical assignment 6: Presentation of a business plan	40%
Final mark	100

The student should obtain a final mark of at least 50% to pass the module. The final mark will determined by calculating the total of the assessments with individual assessment weights as indicated in the above table. A student will fail the module if he/she obtains less than 50% for the final mark.

Moderation

This module is an exit level module that requires external moderation. All external moderators are appointed by senate for a period of three years. Moderators should have at least an NQF level 9 qualification. Since this module is assessed though a variety of assessment methods, refer to the assessment plan in table 4, the moderator moderates at least 50% of the assessment opportunities.

From here on content of the module descriptor consisting of 17 pages has been removed