

1 MISSION AND OBJECTIVES

1.1 Statement of mission and objectives

STANDARD 1.1.1

The medical school has defined its mission and the medical course objectives and has made them known to its stakeholders.

The primary mission of the Medical Faculty at UNSW is to provide excellence in medical education within a scholarly environment of discovery. As such, the Faculty's scholarly activities of education and research are not only considered complementary but indeed interconnected.

STANDARD 1.1.2

In addition to medical education, the mission encompasses social responsibility, research and community involvement.

The Faculty of Medicine has many initiatives, which provide an intersection between the quest for educational excellence and the social responsibility of a public university. The University, and indeed the Faculty, has specific programs in relation to selection of indigenous students and students under ACCESS programs. Specific attention has been provided to major investment in rural initiatives under the Commonwealth Rural Clinical Schools Initiative. The Faculty has a long-standing rural student entry program, to provide equity of access to those who come from educationally disadvantaged rural areas. In addition, the new selection procedures for the major cohort of the Faculty include processes which provide additional equity.

Many academic staff are actively engaged in community outreach programs. Particularly notable, are those involved in primary care, general practice and public health. Specific research and education centres of the Faculty have notable engagements with a diversity of community stakeholder groups. These include the Centre for Health Equity Training Research and Evaluation, the Centre for General Practice Integration Studies and the Centre for International and Multicultural Health. In the latter case, regular consultations occur regarding both education and research with peak state and national bodies involved in multicultural and ethnic affairs, as well as with community action groups throughout affiliated Area Health Services.

Research programs of the Faculty, engage not only with professional and scientific organisations at local, regional, national and international levels, but in addition, in certain settings with sustained community interfaces. For example, the Chronic Fatigue Syndrome "Dubbo" study has been in operation as a cohort for a number of years and parallels closely the sustained engagement of UNSW affiliated researchers from the Garvan Institute of Medical Research in the same community dealing with Osteoporosis and related bone disorders. Research and teaching staff of the Faculty of Medicine participate in many community advisory groups and in pro bono capacity on many boards and councils related to the delivery and maintenance of excellence in health care education and research.

These activities described above, are indicative of the Faculty's commitment to excellence and innovation in all activities. The Faculty aims to lead, not only in scholarly pursuits but also in advocacy and in the establishment of sustainable community partnerships. The outreach of the Faculty is construed through appropriate interfaces at local, regional, national and international levels. The University and the Faculty are particularly proud of long

standing traditions of engagement in international activities. Ultimately, through these aspirations, the Faculty aspires to sustain a role in developing knowledge related to biomedical science, clinical care and clinical cure delivery, in ways which will ultimately encourage social transformation.

STANDARD 1.1.3

The objectives of the medical course incorporate an educational process that will result in a medical doctor initially competent to practise safely and effectively under supervision as an intern in Australia and New Zealand, with an appropriate foundation for further training in any branch of medicine, and a commitment to and capacity for lifelong learning.

The Faculty of Medicine at UNSW has developed an entirely new 6-year undergraduate Medicine program leading to the awards of Bachelor of Medicine and Bachelor of Surgery (MB,BS) with new students starting in year 1 in 2004. This replaces the existing program that leads to the award of the degrees of BSc(Med) MB,BS. Students accepted into the new Medicine program may also enrol in a combined Arts/Medicine program, studied over 7 years, leading to the award of BA MB,BS degrees (see Section 2.8).

While maintaining a commitment to educational excellence in the medical sciences and in clinical areas, the new Medicine program is designed to enable students to:

- develop the capacity for critical thinking, evaluate their own performance and demonstrate how they have progressively achieved the capabilities expected of them
- develop habits of independent learning so that they are more effectively able to keep on learning through their professional careers
- better understand the relationships between society and health
- develop a broad range of communication skills and the ability to work both as a member and a leader of a team

The educational objectives of the new program can be categorised in three broad and inter-connected areas:

Applied Knowledge and Skills

To establish an integrated, interconnected, and organised medical knowledge base as a platform for a professional and personal life of learning through experience

Interactional Abilities

To develop effective interaction with oneself through *reflection*; interaction with others through *communication*; and interaction with information and learning resources through *information literacy* and *critical analysis*.

Personal Attributes

To develop a set of personal attributes and skills appropriate to the professional practice of Medicine.



- These 3 objectives have been translated into a set of educational outcomes. These being **eight desired capabilities in graduates** of the new program (Section 1.4).



Applied Knowledge and Skills

1. Using basic and clinical sciences in medical practice
2. Understanding the social determinants of health and disease
3. Patient assessment and management

Interactional Abilities

4. Effective communication
5. Working as a member of a team

Personal Attributes

6. Self-directed learning and critical evaluation skills
7. Understanding ethics and legal responsibility in Medicine and acting in an ethical and socially responsible manner
8. Development as a reflective practitioner

The following table indicates how these **8 Desired Graduate Capabilities** align with the 37 Attributes of Medical Graduates' recommended by the AMC on pages 12-15 of '*Assessment and Accreditation of Medical Schools*, October, 2002.

Table 1 - Alignment of Objectives of UNSW Medicine Program with AMC 'Attributes'

Objectives of UNSW Medicine Program	Applied Knowledge and Skills			Interactional Abilities		Personal Attributes		
Desired capabilities of UNSW graduates	Using Basic and Clinical science in Medical Practice	Understanding the Social Aspects of Health & Disease	Patient Assessment and Management	Effective Communication	Working as a Member of a Team	Self-directed Learning/Critical Evaluation	Acting Ethically, Legally & Socially Responsible	Development as a Reflective Practitioner
AMC list of attributes								
Knowledge								
1. Scientific method	●	●				●		
2. Normality	●	●						
3. Disease	●	●						
4. Diagnostic procedures	●							
5. Management principles	●	●	●					
6. Pregnancy	●	●	●					
7. Health education		●		●				
8. Suffering/disability	●	●	●		●		●	
9. Relationships	●	●		●				
10. Health systems		●			●			
11. Ethical principles							●	
Skills								
12. Medical history			●	●				
13. Physical examination			●					
14. Clinical skills			●					
15. Diagnosis			●		●			
16. Diagnostic procedures	●		●					
17. Interpretation	●		●					
18. Management plans	●		●	●			●	
19. Communication				●	●		●	
20. Counselling				●			●	
21. Emergency care			●					
22. Critical review			●			●		
23. IT usage						●		
Attitudes								
24. Patient's interests							●	
25. Personal support					●	●		●
26. Respect		●		●			●	
27. Community values		●	●	●			●	
28. Ease suffering			●				●	
29. Perspective							●	●
30. Complexity							●	●
31. Limitations					●			●
32. Maintain standards						●	●	●
33. Teaching & research	●			●	●	●		
34. Patient safety							●	
35. Patient involvement			●	●			●	
36. Cost-effectiveness		●	●					
37. Team work					●			

1.2 Participation in formulation of mission and objectives

STANDARD 1.2.1

The school's mission and objectives have been defined in consultation with its stakeholders.

Wide consultation both internal and external to the Faculty and University has been an important part of the conceptual development of this curriculum, from its earliest inception.

Within the University, this has included full-time and conjoint academic staff of the Faculty of Medicine and of other Faculties within the University who provide teaching to our undergraduate medical students, as well as members of the Senior Executive of the University. Indeed, all faculties of the University have been consulted and the process of transformation within the Faculty of Medicine around the design and the development of a new medical program are seen, in some quarters of the University, as providing a strong example for redevelopment within other faculties. In the formation of working parties and design groups, careful selection has been made to ensure that all groups were represented by similar numbers of pre-clinical and clinical academics. There has also been consultation with students within the current medical course.

Externally, the Dean, Deputy Dean, Associate Dean for Medical Education and leaders within the curriculum working parties have consulted with both the state and federal Ministers for Health and Senior Administrators within their Departments, Senior Administrators within DEST, and with Executive Directors and CEOs of all major teaching hospitals and Area Health Services respectively, associated with the Faculty.

During 1999, senior Faculty including the Dean, Deputy Dean, and Associate Dean for Medical Education consulted widely with community groups regarding their expectations of medical practitioners and with current year 6 students regarding their view of the current curriculum. Consultative meetings were also held with representatives of vocational training colleges, disease specific community support groups and public action groups as well as members of the general public. In the latter instance, focus groups were held at parent teacher organisations within schools, bowling clubs etc.

New procedures for admission to the Program (see section 4) were developed in consultation with a group of secondary school administrators, principals, principals' representatives and career advisers.

1.3 Academic autonomy

STANDARD 1.3.1

The medical school has sufficient autonomy to design and develop the curriculum.

An Overview of Changes at UNSW

The Faculty of Medicine at UNSW has been in a period of change for the last 5 years – at the same time as a significant degree of planning energy has been expended on conceptual and early implementation planning for the new medical course, the Faculty has had significant structural and financial changes as well.

Curriculum Change

The processes of planning for change of the curriculum as well as many of the other changes within the Faculty have used a variety of techniques tailored for dealing with particular issues at hand. For curricular planning, emphasis was placed upon developing a greater sense of Faculty cohesion through bottom-up consensus building with particular attention during the early phases to development of comfort with uncertainty and ambiguity within working groups. Assistance in promoting dialogue through training of key academic staff in facilitation of small group dynamics has been extensively used. These deliberate approaches served several purposes –

- To significantly widen the engagement of academic staff in meaningful developmental and strategic work of the Faculty
- To assist in exploring alternatives to traditional models of education and to promote creativity and innovation

The planning process for the development of the new medical program has had several unique features -

- Early and sustained emphasis on development of a conceptual framework before considering implementation details
- Iterative and extensive consultation processes
- Concurrent Faculty development for the new program embedded in the planning process *per se*

In February 2001, Associate Professor Patrick McNeil was appointed to a new position of Associate Dean (Medical Education) to replace the existing Sub Dean for Teaching and Curriculum (Professor Denis Wakefield). This new position was more explicitly targeted towards development and implementation of the new Medicine program, and addressing issues within the current program to be consonant with planned changes.

Whilst the Faculty of Medicine has the autonomy to develop its curriculum, approval of all new courses or major revisions of existing ones requires approval by the Academic Board and Council of the University. Prior to presentation to the Academic Board, curriculum changes must be formally approved by the Faculty Board. During 2001-2002, the formal approval processes for the New Program within UNSW were achieved, as shown in the following table.

Date	Approval
May 2001	Approval of New Selection Procedures by Faculty of Medicine Board with delegation to Faculty Standing Committee to implement
October 2001	Approval of New Medicine Program by Faculty of Medicine Board with delegation to Faculty Standing Committee to implement
March 2002	Approval of New Selection Procedures by UNSW Academic Board
April 2002	Approval of New Selection Procedures by UNSW Council
July 2002	Approval of New MB,BS and BA MB,BS Programs by UNSW Academic Board
July 2002	Approval of New MB,BS and BA MB,BS Programs by UNSW Council

Restructure of Faculty Organisation and Finances

For planning regarding structural matters of organisation and finances within the Faculty, the Dean created a leadership forum of 25 senior academics to study the issues at hand. Leadership Forum included Heads of Schools, senior academic staff within clinical schools who were not the Head of School and the Associate Deans for Medical Education and Research. The group was construed by the Dean to be an informal transitional structure. Work within this group, which began meeting during late 1999, focussed around developing a common understanding of the problems, their genesis and potential solutions. Ultimately agreement to reorganise the Faculty structure and enter into formal 'management of change' process under the UNSW Enterprise Agreement was reached and then presented for discussion with the Faculty at large. Following extensive consultation within the Faculty, the changes developed through the work of the Leadership Forum with the Dean were implemented.

The major outcomes of the reorganisation of the faculty were: -

- Strict annualisation of allocation of financial resources from the operating fund
- Greater transparency in the management of faculties' finances
- Streamlining of resource management with collapse of previously some 5,000 activity centres to now 70 organisational areas within the chart of accounts
- Merger of the Schools of Anatomy, Physiology and Pharmacology and Pathology to form the School of Medical Sciences
- Merger of the former Schools of Medical Education, Health Services Management and Community Medicine to form the School of Public Health and Community Medicine
- Necessary reduction in numbers of academic and administrative staff to reach budget suitably.

1.4 Educational outcome

STANDARD 1.4.1

The medical school has defined the attributes that medical students should exhibit on graduation. These attributes should equip graduates for subsequent training and future roles in the Australian and New Zealand health systems.

The program is [outcome-based](#) with students required to demonstrate their progressive development of the eight desired graduate capabilities shown on page 32. Achievement of defined levels of each of these capabilities forms the basis for assessment of learning (see Section 3).

Within each capability, there are a number of elements that contribute to achievement of that capability. Each of these elements has a 3-digit code. The first digit refers to the phase in which the particular element should be achieved (1-3). The second digit refers to the particular capability (1-8), and the third digit refers to the numerical order of each element to be achieved within each phase. Complete descriptions of the elements within each capability are shown in Appendix 2, which define achievement by the end of each phase.

The following tables set out the expectations regarding learning outcomes arranged by *capability*, and the element descriptions are often stated in summary form (See also Appendix 2, Volume 2). The 3-digit codes shown in brackets refer to the more complete statement of the capability elements. The black triangle (●) in the columns indicate an emphasis on the development of the relevant capability.

1: Using Basic and Clinical Science in the Practice of Medicine

Mechanisms of Health and Disease

- Explains mechanisms that maintain a state of health. (1.1.1)
- Recognises health problems and relate to normality. (1.1.2)
- Identifies the components of “basic/ medical” science that are necessary to understand a scenario, locates relevant information and interprets the scenario. (1.1.4).
- Describes pathophysiology of diseases and explains at whole person, organ, cellular and molecular levels. (1.1.3, 1.1.4, 2.1.1, 3.1.1)
- Describes natural and modified course of common and critical illnesses. (3.1.3)
- Anticipates complications and their basis (3.1.2)

Diagnostic Investigations

- Chooses and interprets appropriate investigations. (2.1.2)
- Plans and justifies appropriate investigations. (3.1.3)

Approaches to Management

- Describes a general management plan consistent with the pathophysiologic model of health and illness. (1.1.5)
- Understands pharmacological principles and mechanisms of standard treatments. (1.1.5, 2.1.4)
- Explains how management plans alter the illness or disease process. (2.1.3)
- Prioritises approaches with multiple or multi-system diseases. (3.1.4)

Communication of Understanding

- Teaches/explains scientific basis of medicine to junior colleagues and patients. (3.1.5)

	Phase 1	Phase 2	Phase 3
• Explains mechanisms that maintain a state of health. (1.1.1)	●		
• Recognises health problems and relate to normality. (1.1.2)	●		
• Identifies the components of “basic/ medical” science that are necessary to understand a scenario, locates relevant information and interprets the scenario. (1.1.4).	●		
• Describes pathophysiology of diseases and explains at whole person, organ, cellular and molecular levels. (1.1.3, 1.1.4, 2.1.1, 3.1.1)	●	●	●
• Describes natural and modified course of common and critical illnesses. (3.1.3)			●
• Anticipates complications and their basis (3.1.2)			●
• Chooses and interprets appropriate investigations. (2.1.2)		●	
• Plans and justifies appropriate investigations. (3.1.3)			●
• Describes a general management plan consistent with the pathophysiologic model of health and illness. (1.1.5)	●		
• Understands pharmacological principles and mechanisms of standard treatments. (1.1.5, 2.1.4)	●	●	
• Explains how management plans alter the illness or disease process. (2.1.3)		●	
• Prioritises approaches with multiple or multi-system diseases. (3.1.4)			●
• Teaches/explains scientific basis of medicine to junior colleagues and patients. (3.1.5)			●

All capabilities are cumulative, so that once developed they are expected to be refined and exercised in subsequent phases

2: Understanding the Social Aspects of Health and Disease

Social Determinants of Health and Disease

- Identifies social and cultural factors that contribute to health or illness. (1.2.1, 2.2.1)
- Explains mechanisms whereby social, cultural and environmental factors affect health. (1.2.2, 2.2.2)
- Identifies health care needs of disadvantaged groups. (1.2.3, 3.2.2, 3.2.3)
- Plans health care with patients' lifestyle, culture and resources in mind. (3.2.1)
- Recognises major public health problems. (3.2.4)

Measuring Health Status

- Recognises and evaluates patterns of health and illness in society. (1.2.4)
- Explains the utility and limitations of screening individuals or populations for health and illness. (2.2.3)

Health Care Systems

- Describes how people access the Australian Health Care System. (1.2.6,)
- Understands equity and its implications for Health Care Delivery. (1.2.5)
- Describes implications of health care rationing. (2.2.5)

Improving Health by Social Approaches

- Describes primary, secondary and tertiary approaches to disease prevention and health promotion (1.2.7)
- Analyses and evaluates population-based interventions. (2.2.4)
- Collaborates with other health care professionals in health promotion and disease prevention. (3.2.5)
- Inquires into patients' use of complementary medicine and advise appropriately. (3.2.6)
- Able to refer patients to community-based health care services and collaborates appropriately. (3.2.7)

	Phase 1	Phase 2	Phase 3
• Identifies social and cultural factors that contribute to health or illness. (1.2.1, 2.2.1)	●	●	
• Explains mechanisms whereby social, cultural and environmental factors affect health. (1.2.2, 2.2.2)	●	●	
• Identifies health care needs of disadvantaged groups. (1.2.3, 3.2.2, 3.2.3)	●		●
• Plans health care with patients' lifestyle, culture and resources in mind. (3.2.1)			●
• Recognises major public health problems. (3.2.4)			●
• Recognises and evaluates patterns of health and illness in society. (1.2.4)	●		
• Explains the utility and limitations of screening individuals or populations for health and illness. (2.2.3)		●	
• Describes how people access the Australian Health Care System. (1.2.6,)	●		
• Understands equity and its implications for Health Care Delivery. (1.2.5)	●		
• Describes implications of health care rationing. (2.2.5)		●	
• Describes primary, secondary and tertiary approaches to disease prevention and health promotion (1.2.7)	●		
• Analyses and evaluates population-based interventions. (2.2.4)		●	
• Collaborates with other health care professionals in health promotion and disease prevention. (3.2.5)			●
• Inquires into patients' use of complementary medicine and advise appropriately. (3.2.6)			●
• Able to refer patients to community-based health care services and collaborates appropriately. (3.2.7)			●

All capabilities are cumulative, so that once developed they are expected to be refined and exercised in subsequent phases

3: Patient Assessment and Management

Consultation

(See also **Effective Communication**)

- Identifies cardinal symptoms related to body systems. (1.3.1)
- Conducts a detailed consultation with a patient including symptom analysis. (2.3.1)
- Conducts efficient focussed consultation. (2.3.2)
- Elicits relevant lifestyle, occupational, social and family risk factors for illness and appreciates their significance. (2.3.3)
- Identifies social, cultural and psychological factors that impact on a patient's health. (2.3.4, 3.3.1)
- Elicits complications and adverse effects of patient's condition and its treatment. (3.3.2)
- Handles unexpected findings and prolonged uncertainty appropriately. (3.3.3)

Physical Examination

- Examines a system in isolation. (1.3.2)
- Conducts a basic 'whole person examination. (1.3.3)
- Conducts a proficient 'head to toe' physical examination on an adult patient. (2.3.5)
- Conducts a proficient examination related to patient and their presentation. (3.3.4)

Procedural Skills

- Phase 1 list. (1.3.4)
- Phase 2 list. (2.3.6)
- Phase 3 list. (3.3.5)

Clinical Reasoning

- Applies elementary clinical reasoning to health scenarios. (1.3.5)
- Employs clinical reasoning skills in deriving diagnoses and management plans that encompass multiple aspects of health. (2.3.7)
- Identifies the longitudinal impact of illness on patients and families/carers. (2.3.8)
- Diagnoses cases and conditions specified for Phase 3. (3.3.6)
- Demonstrates effective clinical reasoning and diagnostic skills in response to clinical problems. (3.3.7)
- Recognises typical and atypical features of a presentation. (3.3.8)
- Selects and justifies appropriate investigations and management for Phase 3 cases and conditions. (3.3.9)

	Phase 1	Phase 2	Phase 3
• Identifies cardinal symptoms related to body systems. (1.3.1)	●		
• Conducts a detailed consultation with a patient including symptom analysis. (2.3.1)		●	
• Conducts efficient focussed consultation. (2.3.2)		●	
• Elicits relevant lifestyle, occupational, social and family risk factors for illness and appreciates their significance. (2.3.3)		●	
• Identifies social, cultural and psychological factors that impact on a patient's health. (2.3.4, 3.3.1)		●	●
• Elicits complications and adverse effects of patient's condition and its treatment. (3.3.2)			●
• Handles unexpected findings and prolonged uncertainty appropriately. (3.3.3)			●
• Examines a system in isolation. (1.3.2)	●		
• Conducts a basic 'whole person examination. (1.3.3)	●		
• Conducts a proficient 'head to toe' physical examination on an adult patient. (2.3.5)		●	
• Conducts a proficient examination related to patient and their presentation. (3.3.4)			●
• Phase 1 list. (1.3.4)	●		
• Phase 2 list. (2.3.6)		●	
• Phase 3 list. (3.3.5)			●
• Applies elementary clinical reasoning to health scenarios. (1.3.5)	●		
• Employs clinical reasoning skills in deriving diagnoses and management plans that encompass multiple aspects of health. (2.3.7)		●	
• Identifies the longitudinal impact of illness on patients and families/carers. (2.3.8)		●	
• Diagnoses cases and conditions specified for Phase 3. (3.3.6)			●
• Demonstrates effective clinical reasoning and diagnostic skills in response to clinical problems. (3.3.7)			●
• Recognises typical and atypical features of a presentation. (3.3.8)			●
• Selects and justifies appropriate investigations and management for Phase 3 cases and conditions. (3.3.9)			●

All capabilities are cumulative, so that once developed they are expected to be refined and exercised in subsequent phases

4: Effective Communication with Patients, Team Members, Colleagues and the Community

	Phase 1	Phase 2	Phase 3
Communicates Effectively with Patients and Families			
• Understands and utilises good communication principles. (1.4.1)	●		
• Communicates effectively in a straight-forward 1:1 consultation with a patient using principles. (1.4.2)	●		
• Demonstrates sensitivity with dying patients and their families. (1.4.3)	●		
• Communicates effectively with patients and their carers/families with an awareness of language and cultural issues – includes explaining procedures or obtaining consent. (2.4.1)		●	
• Communicates effectively with difficult or aggressive patients. (2.4.2)		●	
• Counsels patients on health risks including nutrition, smoking cessation and alcohol management. (2.4.3)		●	
• Conducts proficient in depth consultation. (3.4.1)			●
• Explains likely progress and outcomes of a disease. (3.4.2)			●
• Communicates bad news sensitively. (3.4.3)			●
Communicates Effectively with Peers and Tutors			
• Presents reports effectively to peers. (1.4.4)	●		
• Communicates effectively with a range of health care professionals. (2.4.4)		●	
• Presents clinical cases effectively to groups of peers and tutors. (2.4.5)		●	
• Communicates effectively across a clinical team. (3.4.4)			●
• Presents own audit data for feedback. (3.4.5)			●
Communicates with Communities			
• Develops effective health promoting messages appropriate to target groups. (2.4.6)		●	
• Able to write or critique a piece of medical journalism. (3.4.6)			●

All capabilities are cumulative, so that once developed they are expected to be refined and exercised in subsequent phases

5: Working as a Member of a Team

Participates Effectively in Peer Groups

- Identifies different purposes of group work and requirements of different types of groups (eg task focussed groups v. exploratory or discussion groups). (1.5.1)
- Analyses how well a group is working, discusses differences in contribution styles and identify own contributions to group work. (1.5.2)
- Gives feedback constructively and respectfully, receives feedback openly and non-defensively. (1.5.3)
- Analyses and evaluates personal style in group work. (1.5.4)

Leads and Manages Groups of Peers

- Identifies goals for the group work, identifies possible constraints, plans a process for achieving goals. (2.5.1)
- Chooses and modifies the environment to support the process. (2.5.2)
- Encourage wide participation, addresses obstructive behaviour, acknowledges contributions, analyses and manages difficulties which arise. (2.5.3, 2.5.4)
- Helps the group keep on time and on task (2.5.5)
- Identifies some specific personal skills in need of improvement. (2.5.6)

Participates effectively in Health Care Teams

- Explains roles and functions of other health professionals in patient care. (1.5.5)
- Discusses own role as a new member of a team (health care team or team of peers) and relationships with other team members, health professionals and patients. (1.5.6)
- Recognises significant features of a team, including roles, responsibilities, personalities and power relations. (3.5.1)
- Defines an appropriate role for him or her self (3.5.2)
- Analyses events in a team from others' viewpoints, including identifying their goals and recognising their feelings. (3.5.3)
- Analyses and solves problems collaboratively, behaves pro-actively, taking action and responsibility when necessary. (3.5.4, 3.5.5)
- Makes appropriate referrals when necessary. (3.5.6)
- Assesses own performance. (3.5.7)

	Phase 1	Phase 2	Phase 3
• Identifies different purposes of group work and requirements of different types of groups (eg task focussed groups v. exploratory or discussion groups). (1.5.1)	●		
• Analyses how well a group is working, discusses differences in contribution styles and identify own contributions to group work. (1.5.2)	●		
• Gives feedback constructively and respectfully, receives feedback openly and non-defensively. (1.5.3)	●		
• Analyses and evaluates personal style in group work. (1.5.4)	●		
• Identifies goals for the group work, identifies possible constraints, plans a process for achieving goals. (2.5.1)		●	
• Chooses and modifies the environment to support the process. (2.5.2)		●	
• Encourage wide participation, addresses obstructive behaviour, acknowledges contributions, analyses and manages difficulties which arise. (2.5.3, 2.5.4)		●	
• Helps the group keep on time and on task (2.5.5)		●	
• Identifies some specific personal skills in need of improvement. (2.5.6)		●	
• Explains roles and functions of other health professionals in patient care. (1.5.5)	●		
• Discusses own role as a new member of a team (health care team or team of peers) and relationships with other team members, health professionals and patients. (1.5.6)	●		
• Recognises significant features of a team, including roles, responsibilities, personalities and power relations. (3.5.1)			●
• Defines an appropriate role for him or her self (3.5.2)			●
• Analyses events in a team from others' viewpoints, including identifying their goals and recognising their feelings. (3.5.3)			●
• Analyses and solves problems collaboratively, behaves pro-actively, taking action and responsibility when necessary. (3.5.4, 3.5.5)			●
• Makes appropriate referrals when necessary. (3.5.6)			●
• Assesses own performance. (3.5.7)			●

All capabilities are cumulative, so that once developed they are expected to be refined and exercised in subsequent phases

6: Self-Directed Learning and Critical Evaluation Skills

*Self-Directed Learning and Critical Evaluation involves both self-assessment and reflection. These elements are addressed under the capability of **Development as a Reflective Practitioner**.*

	Phase 1	Phase 2	Phase 3
Learning Projects			
<ul style="list-style-type: none"> Identifies questions and learning needs arising from scenario presentations and clinical interactions. Engages in appropriate activities to address identified needs. (1.6.1, 2.6.1) 	●	●	
<ul style="list-style-type: none"> Negotiates the focus and scope of learning projects. (1.6.2, 2.6.2) 	●	●	
<ul style="list-style-type: none"> Completes individual and group learning projects efficiently. (1.6.2, 1.6.3, 2.6.3) 	●	●	
<ul style="list-style-type: none"> Initiates (as opposed to selecting and negotiating) learning projects. (1.6.2, 3.6.1) 	●		●
Finding, Evaluating and Synthesising Evidence			
<ul style="list-style-type: none"> Demonstrates skill in: 	●		
<ul style="list-style-type: none"> Formulating and applying appropriate information searching strategies 			
<ul style="list-style-type: none"> Using databases such as Medline and other information sources appropriately. 			
<ul style="list-style-type: none"> Evaluating the quality and relevance of the information found. 			
<ul style="list-style-type: none"> Using appropriate citation standards 			
<ul style="list-style-type: none"> Understanding basic statistical principles 			
<ul style="list-style-type: none"> Handling and presenting quantitative and qualitative information appropriately. (1.6.4) 			
<ul style="list-style-type: none"> Reviews evidence from a range of sources, including published research, internet and medical journalism, evaluates and articulates a considered opinion. (2.6.4) 		●	
Self Development			
<ul style="list-style-type: none"> Identifies own learning needs and undertakes appropriate formal and informal educational activities routinely. (3.6.2, 3.6.3) 			●
<ul style="list-style-type: none"> Identifies future postgraduate learning needs, environments and challenges. Plans self-care and time-management strategies to facilitate transition to subsequent training. (3.6.4, 3.6.5) 			●

All capabilities are cumulative, so that once developed they are expected to be refined and exercised in subsequent phases

7: Understanding Ethics and Legal Responsibility in Medicine and Acting in an Ethical and Socially Responsible Manner

Developing a Personal Value System

- Explores the psychological, social and cultural determinants of one's own values in relation to clinical situations. (1.7.1)
- Articulates personal and professional values. (2.7.1)
- Distinguishes demands of professional behaviour and personal preference and behaves professionally. (2.7.2)
- Responds appropriately to behaviour and situations that might compromise the well-being of patients and others – including inappropriate or unprofessional behaviour in oneself and others. (3.7.1)

Sensitivity, Tolerance and Respect for Others

- Develops sensitivity to different needs and values of others, including those from different social and cultural backgrounds, and acts with sensitivity and respect. (1.7.2)
- Recognises conflicting values and ethical issues in interactions between students, student interactions with patients and staff and in clinical situations and develops skills in discussing and resolving such conflicts. (1.7.3, 3.7.2)

Clinical Ethics

- Recognises ethical aspects of a scenario - including autonomy, informed consent, duty of care, confidentiality and conflict of interest - and analyses them in terms of at least one ethical framework (such as the bioethical principles approach). (1.7.4)
- Recognises the complexity of ethical issues related to working with dying patients and their families; appreciates the need to call on appropriate supports. (2.7.5)
- Recognises and responds appropriately to ethical aspects of common clinical interactions. (2.7.3, 2.7.4, 3.7.3)
- Maintains ethical and legally appropriate standards within each clinical encounter and in the face of situational and systemic pressures. Practices in a compassionate manner. (3.7.4)
- Analyses the extent that systems and institutional procedures support equitable and compassionate health care. (3.7.5.)

Legal Responsibilities

- Understands the legal responsibilities of health professionals especially those relating to informed consent, duty of care, contract, confidentiality, conflict of interest, and those that are specified as part of registration under the Medical Practice Act (1.7.5, 2.7.6, 3.7.6)

	Phase 1	Phase 2	Phase 3
Developing a Personal Value System	●	● ●	●
Sensitivity, Tolerance and Respect for Others	● ●		●
Clinical Ethics	●	● ●	● ● ●
Legal Responsibilities	●	●	●

All capabilities are cumulative, so that once developed they are expected to be refined and exercised in subsequent phases

8: Development as a Reflective Practitioner

Reflective practice involves giving and receiving feedback. Feedback is addressed in the teamwork and communication skills capabilities. Reflection becomes focused on clinical experiences in later phases.

	Phase 1	Phase 2	Phase 3
<p>Self and Peer Assessment</p> <ul style="list-style-type: none"> Engages in self and peer assessment of own and others' work and contributions to group activities. (1.8.1, 1.8.2) Participates constructively in portfolio and VI group reviews, evaluating own learning outcomes and processes, and identifying issues that need to be addressed. (1.8.3) Seeks feedback on own performances from tutors, peers and patients, and acts to address issues raised. (2.8.1, 2.8.3) Supports the reflective processes of peers (eg asks questions, provides constructive feedback). (2.8.2) 	● ●	● ●	
<p>Reflective Practitioner</p> <p>Identifies and explains changes in own behaviour and conceptions arising from reflection on past experiences. (1.8.5)</p> <ul style="list-style-type: none"> Provides accurate and neutral descriptions of own behaviour, emotions, and intentions. Analyses the impact of own and other's behaviour and cultural background on self and others. (1.8.4, 2.8.6) Provides a rationale for his or her own actions and considers alternate courses of action in discussion with others. (2.8.4) Recognises and takes into account the influence of contextual, social, political and cultural factors, and the viewpoints of others, when discussing issues, or when formulating and justifying clinical plans and actions. (2.8.5, 3.8.1, 3.8.2) Develops plans for action and for coping in potentially difficult and/or stressful situations. (3.8.3) Responds flexibly to changing and uncertain situations. (3.8.4) 	● ●	● ● ● ●	● ● ●
<p>Recognising Limits</p> <ul style="list-style-type: none"> Recognises the limits of his/her own and others' knowledge and skill, and seeks appropriate and timely assistance. (2.8.7, 3.8.5) Acknowledges his or her limitations and mistakes and reflects on them so as to develop both personally and professionally. (3.8.6) 		●	● ●

All capabilities are cumulative, so that once developed they are expected to be refined and exercised in subsequent phases

STANDARD 1.4.2

The medical school has specified the articulation between attributes to be acquired by graduation and those to be acquired in postgraduate training.

A number of features of the new curriculum are designed to prepare students for [lifelong learning](#) and to provide an understanding of the role of uncertainty in clinical practice, as articulated above. However, a specific module for intern preparation is being designed to address additional issues identified in a survey of recent graduates as deficient in their own student training and to aid in the transition to postgraduate training.

These are alluded to in the tables above as well as in the graduate capabilities, and encompass under-explored and hitherto under-developed student attributes. These revolve around the issues of uncertainty, change, profound new stressors and the need for flexibility.

Providing learning in the ability to handle unexpected findings and prolonged uncertainty in the clinical interaction (capability element 3.3.3) is a recognised deficiency in current training and will be highlighted in “intern preparation”. In addition team skills will be strengthened to ensure some familiarity with conflict resolving abilities (3.5.1, 3.5.3). Self-development will be targeted (3.6.4, 3.6.5) through identification of future postgraduate learning needs (both as junior medical officer and as career trainee), and strategies and skills developed to facilitate transition to new learning styles.

A major flaw perceived by new graduates is a lack of training in the recognition of stress, fatigue and workload issues, and the impact of these on clinical performance and personal ethics. Processes to inculcate graduate capabilities allowing identification of situational and systemic pressures impinging on personal performance and ethics (3.7.4) will be developed. Training in strategies to maintain clinical and ethical integrity will underpin this aspect of the intern preparation module.

2 THE MEDICAL CURRICULUM

2.1 Curriculum design and educational methods

STANDARD 2.1.1

The medical school has defined a curriculum model and teaching and learning methods that are consistent with the educational objectives of the medical course.

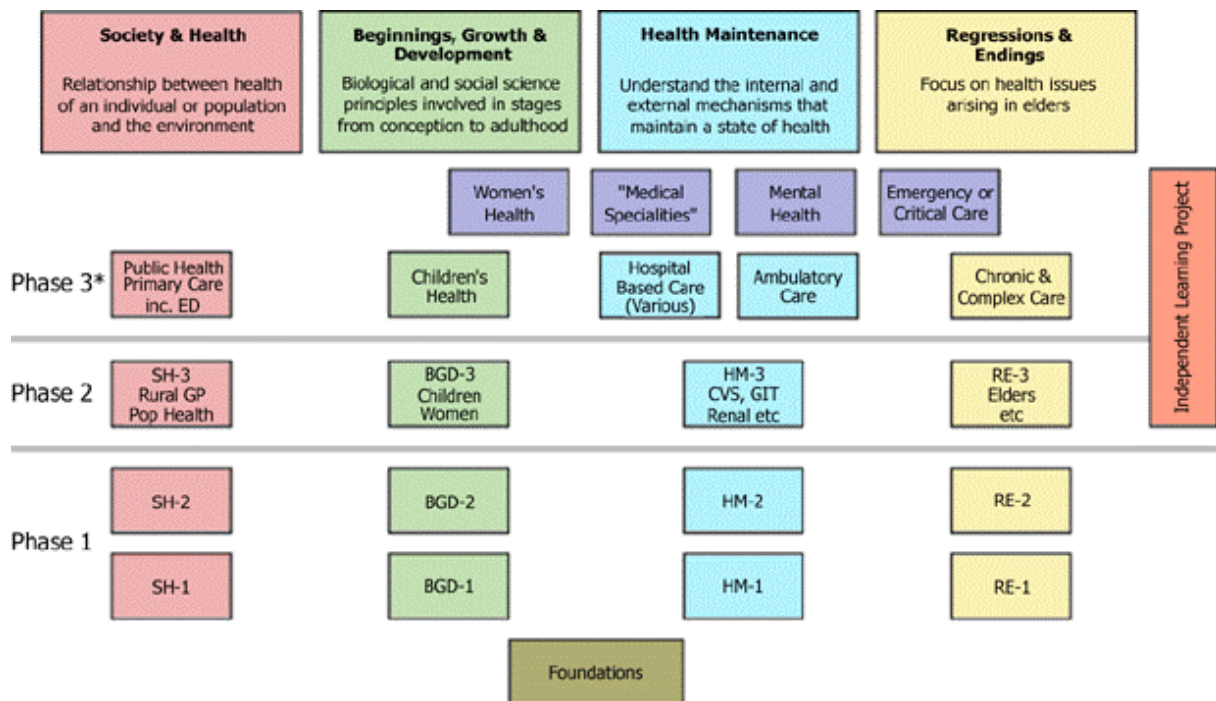
Brief Overview of the New Medicine Program

The New Program is a six-year program divided into **three phases**. There are **four principal organisers, termed domains** that organise the program through all three phases, and provide an explicit mechanism for **vertical integration** of content (see Figure 1). Within each domain, there are **four major themes** that provide opportunities for students to engage content in an integrated fashion in the contexts of health scenarios, clinical presentations, or specific patient problems encountered during clinical experience.

Content to be studied has been broadened to include aspects of both proactive and reactive approaches to health issues in both individuals and populations, and is organised into three content streams – biomedical sciences, the social aspects of health and illness, and medical practice.

The learning process emphasises increasing student autonomy, learning from experience, collaborative learning, and the development of **adult teacher-learner relationships**. Assessment is **outcome-based** requiring students to demonstrate capability in a range of medicine-specific as well as more generic capabilities.

Domains



*Names of Phase 3 modules are possible examples only

Figure 1 – Domains as vertical organisers in the new Medicine program

Entry
Year 1

Details of the Curriculum Model

Educational Principles

The new program is based upon contemporary pedagogical principles. It will use a range of teaching methods designed to be maximally responsive to the needs of 21st century learners. While traditional forms of instruction will continue to play significant roles in the new program, it emphasises student-centred learning and its design maximises students' opportunities to assume responsibility for their learning.

Fundamental design principles are that:

- Learning is integrated horizontally and occurs within authentic contexts
- Material learned is linked vertically to prior and future learning
- Learning is generally student-centred and collaborative and based upon the development of adult teacher-learner relationships
- Experiences form an important basis for learning
- Students graduate as independent learners who can continue learning through experience
- A high degree of inherent flexibility is built into the program to suit the changing needs of future practitioners and the diverse learning styles of adult learners, including selectives, electives, and choice in settings for clinical learning.

The program has a spiral or re-iterative design. The 'nautilus shell' has been used as a metaphor to represent this concept and has become an identifiable icon for the new program. Students will visit content issues on repetitive occasions as they progress through the program, in ways that require increased cognitive complexity as a vertical organiser through the program. Learning is embedded within contexts of authentic medical practice. The nature of these contexts varies across the three phases. In phase 1, health scenarios represent constructed situations to emphasise learning of particular themes, and provide a cognitive scaffold for personal knowledge construction. Limited actual experiences reinforce these contexts. In phases 2 and 3, actual clinical and practical experiences provide contexts for learning.

Organization of Learning and Content

A Broadening of Content: Medical practice includes proactive and reactive approaches to health and illness that can be directed towards individuals or populations. (Figure 2)

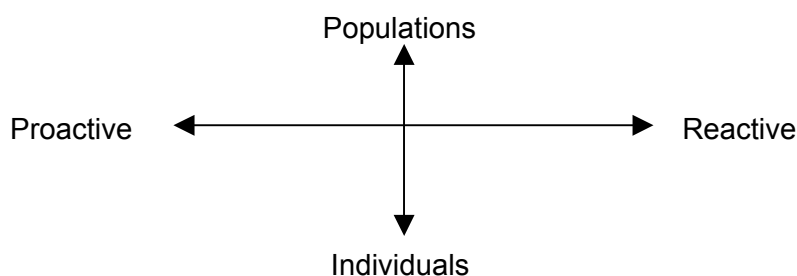


Figure 2 (after Nossar, V.)



Medical education programs have traditionally concentrated their content in the lower right quadrant of reactive care of individuals. The new program will encompass a broadening of content to view health and illness within a bio-psycho-social model that includes aspects from the other three quadrants.

Organization Around the Human Life Cycle: The program is organized around four domains. Three of these represent stages of the human life cycle, the fourth the environment in which life exists. The domains are:

<p>Society and Health (S&H) – emphasises the inter-relationship between the health of the individual or a population and the environment in which they live.</p> <p>Beginnings, Growth and Development (B,G&D) – involves study of the biological and social science principles relevant to the life cycle stage from conception to adulthood.</p> <p>Health Maintenance (HM) – the aim is for students to understand the internal and external mechanisms that maintain a state of health, and how disturbance of these mechanisms leads to disease</p> <p>Regressions and Endings (R&E) – focuses on health issues that arise in elders and builds upon the understanding students have acquired in previous domains</p>
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Within each domain, there are four major themes (table 2). These 16 themes are key overarching concepts considered important to understanding health, illness and medical practice.

Table 2 – Themes of the New Program

Domain	Major Themes
Society and Health	Society, culture and genes Socioeconomic determinants of health Health delivery systems Health and human rights
Beginnings, Growth and Development	Conception, pregnancy and birth Childhood growth and development Puberty, adolescence, sexuality and relationships Nutrition, growth, and body image
Health Maintenance	Homeostasis, sustenance, and equilibrium Education, health promotion, and disease prevention Host defence Lifestyle factors that risk health
Regressions and Endings	Menopause The ageing process Degenerative disease Death, dying and palliative care

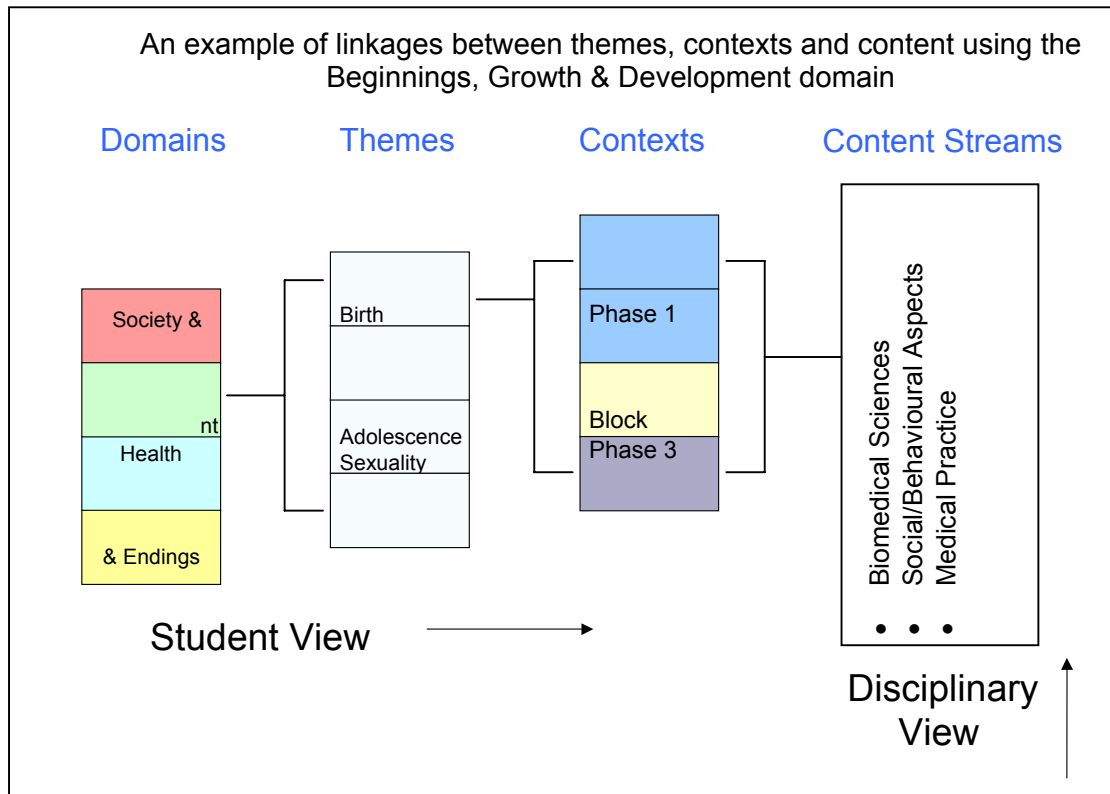


Themes provide a broad issue for students to engage a range of content topics (horizontal integration), and students revisit the theme in different contexts throughout the program (vertical integration)

Content Streams: The topics that are considered most relevant to specific domains are integrated into a smaller number of content streams. These are:

- Biomedical Sciences
- Social and Behavioural Aspects of Health and Illness
- Medical Practice

A conceptual system for linking domains, themes, scenarios and content is shown in the following figure.



Blending Science and Practice: In keeping with an emphasis on *application* of knowledge, and embedding learning within context and practice, the pre-clinical/clinical division of traditional curricula has been dismantled in the new program. The scientific concepts that underlie medical practice are represented at all stages of learning. In parallel, clinical and practical experiences are utilised by students from an early stage as a context for, and primary stimulus for learning (see also Sections 2.3-2.6).

Vertical Integration: An innovative aspect of the learning process is the use of vertical integration of learners. At various stages of the program, learning will occur in small groups of students drawn from at least 2 different years (vertically integrated group - **VI group**). Eg, in phase 1, a VI group will comprise 6 students from each of years 1 and 2. The educational aims of vertical integration of learners include:

- Encouraging collaborative learning, providing peer support and mentoring
- Vertical integration of related content (students at different stages learning different aspects of a theme/scenario/case)
- Supporting horizontal integration since students within single groups may focus on different aspects of contexts/cases

- Supporting reiteration and refinement of knowledge in the light of new experience [revisiting knowledge, continuous (lifelong) learning] - provides a way of dealing with increasing complexity of concepts
- Peer-modelling of behaviour and learning approaches
- Enhancing the power of experiences by collaborative reflection
- Mirroring real unit teams (eg. intern/registrar/consultant)

STANDARD 2.1.2

The teaching and learning methods encourage students to take responsibility for their learning process and prepare them for lifelong learning.

Teaching and Learning Methods

The structure of the new program across the 6 years is shown in Figure 3 and described in more detail in Section 2.8. The program has a strong modular design consisting of terms or blocks of 8 weeks duration. Years 1 - 3 have four terms, years 4 - 6 have five terms. The timing of terms is aligned across all years. Each 8 week term is designated as a separate 'course' for enrolment purposes with its own course code.

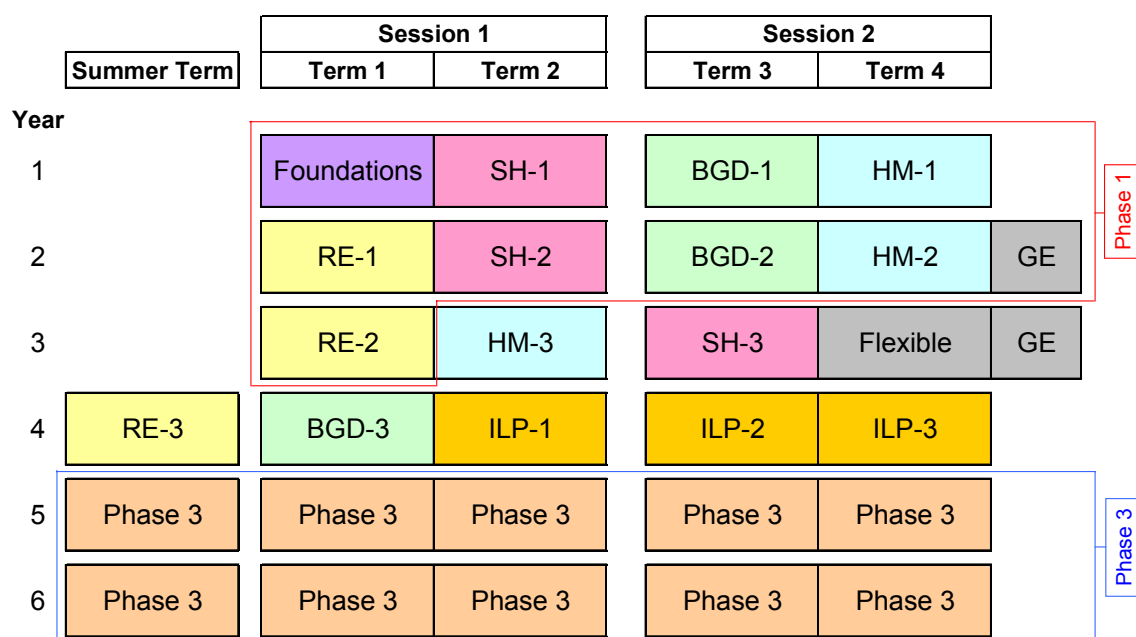


Figure 3 - A Typical Sequence of Blocks in the New Program

Rather than using a single pedagogy, the program is divided into three phases that utilise different teaching/learning approaches - scenario-based learning, practice-based learning and independent reflective learning. A constant theme in all phases is emphasis on the experiential learning cycle.

Phase 1: Scenario-Based Learning (SBL)

Overview

The new phase 1 program is an [integrated program](#), in which students learn the fundamental biological, behavioural and social sciences that form the basis of understanding health and

disease, in contexts of real medical practice, termed health scenarios. The program is divided into nine 8-week blocks studied over 4.5 academic sessions. The 9 blocks comprise an introductory Foundations Program, followed by 8 × 8-week modules focusing on basic medical sciences in relation to the human life cycle; social, behavioural, ethical and legal issues related to health care; and early experience in clinical or other health-related environments. These 8 blocks represent 2 cycles through the four domains that organise the curriculum: Society and Health; Beginnings, Growth and Development; Health Maintenance; and Regressions and Endings. The respective courses that students enrol in are the domain name followed by the numbers -1 (first cycle) or -2 (second cycle) (figure 3).

Vertically integrated groups

Vertical integration occurs at 2 levels in the new curriculum. At the macro or program level, teaching and learning in each organising domain occurs during each of the 3 phases (see Figure 1). This provides an explicit link between current, prior and future learning.

At the micro or student level, students from different years of the program learn within the same learning groups. Thus, students are considered to be phase 1, 2 or 3 students, rather than years 1, 2, 4 or 6 students etc. The phase 1 program will commence in a non-vertically-integrated fashion with year 1 students only in 2004. However, when fully operational, students across 2 years will learn together in vertically-integrated (VI) groups made up of 6 first year and 6 second year students. The first VI groups will occur in mid-session 1 in 2005 with year 1 and 2 students. The final block, Regressions and Endings, will integrate students from years 2 and 3. This will first occur in the first half of session 1 in 2006.

VI groups will meet twice a week and form the ongoing core of teaching in the phase. They will provide a venue for the development of group and team-work skills, for the reinforcement of communication skills, and for supporting the independent learning and reflective activities of students in the phase.

The facilitators of VI groups will come from a diverse range of disciplinary backgrounds spanning the medical, clinical, social, health-care and bio-medical sciences. Facilitators will need to develop good rapport with students and be able to take on the role of a facilitator in a small group. Facilitators will work with a VI group for a minimum of two eight week blocks (one academic session) each year.

In session one (Foundations, Society and Health, Regressions and Endings) of each year there will be an emphasis on recruiting facilitators with medical or community-based health care practitioner experience. In session two (Beginnings Growth and Development, and Health Maintenance) of each year the emphasis will fall slightly more on recruiting facilitators who are bio-medical scientists. Over the two sessions in a year both scientists and medical or health care practitioners will be allocated to the facilitation of each VI group.

In order to address the multidisciplinary and integrative challenges of the role, the facilitators in each session will work in a team to provide educational and content area support to each other. Formal training sessions in small group facilitation will also be available.

The two cycles of phase 1

There are two 'halves' to the phase 1 program; an 'A' component and a 'B' component, each similar as they are based upon study of the same domains and themes, but different in their health scenarios and in the content to be learned. The 'A' component will be offered in each even numbered calendar year, and the 'B' component in odd-numbered years. Students entering the program in even-numbered calendar years start phase 1 in the A half (cycle AB), whereas students entering in odd-numbered years start with the B half (cycle BA).

This arrangement is somewhat linear from a content perspective, but iterative or spiral, since the themes to be studied are common to both A and B components. As an example, in Health Maintenance, students study the theme of 'Homeostasis, sustenance and equilibrium' by exploring the circulatory system in the 'A' component, and by exploring the digestive/metabolic/excretion systems in the 'B' component. In phase 1, all students study the related content areas once, and the theme twice – then to be revisited in later phases.

Regardless of their entry point, phase 1 students within the program encounter the same scenarios, content topics, learning resources, learning activities, and assessments, at any point in time, irrespective of their 'year' status. There are little or no activities that are specifically designed for either year 1 or year 2 students. Students may therefore complete the phase in two ways.

Emma joins the program in 2004, an A year, and completes the phase in the following order:

	Session 1		Session 2		
2004	Foundations	Society & Health A	Beginnings, Growth & Development A	Health Maintenance A	
2005	Regressions & Endings B	Society & Health B	Beginnings, Growth & Development B	Health Maintenance B	General Education (6 UoC)
2006	Regressions & Endings A				

(Note that the terms 'A' or 'B' refer to the educational content and are not equivalent to the courses –1 and –2)

Albert joins the program in 2005, a B year and completes the phase in the following order:

	Session 1		Session 2		
2005	Foundations	Society & Health B	Beginnings, Growth & Development B	Health Maintenance B	
2006	Regressions & Endings A	A	Beginnings, Growth &	Health Maintenance A	General Education (6 UoC)
2007	Regressions & Endings B				

Emma and Albert will work together in 2005 (Emma's second year and Albert's first year) commencing in the Society and Health B block. In 2005 both students will undertake the B cycle of the phase. In 2006, they will work together in Regressions and Endings A, after which Albert will continue the A half, whilst Emma will go on to phase 2.

In each cycle the scenarios that illustrate the themes of the domain and contextualise the teaching and learning in a block will be different. SBL is different to a traditional PBL course in several ways.

- Health scenarios are broader than clinical problems or presentations - research questions, public health issues, and aspects of management are all suitable scenarios, provided that they are authentic activities relevant to a medical graduate.

- Health scenarios are not designed as problem solving exercises - the diagnosis will usually be supplied or evident - motivation to learn is not based upon diagnostic solution. The process is an adult education-style approach - for the student - what don't I know and what do I need to know to 'understand' the scenario and develop learning tasks to achieve such understanding.
- SBL encourages development of an adult teacher-learner relationship whereby teachers facilitate learners to construct their own understanding. SBL tutors can be content experts, they can provide instruction, they can convey their understanding of a topic, they can correct misconceptions, and they can encourage student inquiry - they make learning possible. In its traditional description, PBL tutors are encouraged to be facilitators of student activity but discouraged from providing the benefit of their expertise.
- Typical scenarios will present a health care issue or situation from several perspectives and should be rich enough in their implications to stimulate student exploration across the content streams and capabilities of the program. Activities related to a scenario will extend for up to three weeks, allowing for deep and extensive explorations of related material. Each block will typically include 3-4 scenarios.

Resource activities

Resource activities (tutorials, practicals, lectures, and workshops) are offered to support student learning in each block. The resource activities together with the 3-4 hours of VI group meetings add up to approximately 17-18 hours of scheduled face-to-face contact hours each week. Students are expected to spend additional time each week, working on their assignments and projects, preparing for the end of block examination, and studying the topics identified in the VI group as being of relevance.

The content map which details the scenarios and content focus of the activities in each content stream in each cycle of the phase is shown in Appendix 3 Volume 2.

Communication and Early Clinical Skills program

An integrated program for learning communication and early clinical skills is being developed and commences in phase 1. Students will attend a 3-hour campus-based communication workshop every 2 weeks, which alternates with tutorials on clinical communication and skills located in clinical environments. During these early patient contacts, students will also have opportunities to engage in experiential activities with patients independently (see Sections 2.5 and 2.6).

Weekly schedule

A typical weekly schedule for phase 1 is shown below. Scenario cycles will generally be of 2 weeks duration and commence on a Thursday and end on a Wednesday, except for the first cycle of a block, which starts on a Monday and runs for 10 days. The last two days of the block are available for assessments and reflections/feedback. On one day per fortnight mid-cycle, students attend a clinical environment. There are 6 large group teaching episodes (lectures) per week, 2 x 2 hour practical labs or sometimes 1 x 3 hour practical lab and 1 content-specific tutorial per week.

Phase 2: Practice-Based Learning

The term applied to phase 2 is *Practice-Based Learning*. It has been designed so that students are required to reflect on actual clinical and practical experiences and use these purposefully to reshape their knowledge bases. Small group tutorials, integrated science practicals, clinical or other practical experiences, and an extended case-based methodology are proposed to combine the acquisition of clinical skills with the learning of mechanisms and principles underlying health and illness. Though involving clinical attachments, phase 2 is NOT designed to be clinical clerkships, i.e. this is not a time for asking students to accept real responsibility for patient care as part of a team. There are 3 components of phase 2:

- Core Clinical Component (4 blocks)
- Flexible Course
- Independent Learning Project

Core Clinical Component

Phase 2 builds upon the learning established in phase 1, but differs in that personal and shared students' experiences form the context for learning, rather than constructed scenarios. The core of phase 2 is one further cycle through the four organising domains.

These 4 courses are called:

- Society and Health 3
- Beginnings, Growth and Development 3
- Health Maintenance 3
- Regressions and Endings 3

Students must complete all 4 courses, but they can be taken in any order. At any point in time, approximately one quarter of the phase 2 student body will be enrolled in each of the four blocks. A system of optimising student choice whilst ensuring even spread of students between the blocks at any given time will operate.

Students enrolled in these 4 courses will be distributed amongst the Faculty's clinical learning environments for approximately 60% of their time, and be attached to units where they will encounter patients or situations relevant to the themes of that domain. The remaining 40% of their time will consist of structured teaching activities that are predominantly campus-based.

These will include:

- Lectures - 2 hours per week
- Integrated science practicals or correlation workshops - 3 hours per week
- Integrated tutorials - 2 hours per week
- Clinical tutorials - 4 hours per week
- Case-based tutorials - 4 hours per week

Although the clinical locations and experiences encountered by individual students enrolled in the same course may vary, the program of study is relatively prescribed. Each module is structured around 8 clinical presentations or issues as the contexts for learning (one per week). Each weekly presentation has a small number of associated 'exemplar' cases or

scenarios Appendix 4. Typically, at any point in time there will be an average of 8-10 students attached to an individual clinical location who are studying one of the 4 core courses. Each student (or occasionally a pair of students) will be allocated to one of the 8 clinical presentations, scheduled for a particular week. The student(s) is/are responsible for 'clerking' a patient or patients with one or more of the exemplar cases relevant to the clinical presentation, researching the underlying science or social aspects, and presenting the case in written form as the basis of the weekly case-based tutorial.

Flexible Course

In addition to the 4 core clinical phase 2 courses, all students must complete a 12 units of credit (UoC) course (or courses) offered by a Faculty or Faculties other than Medicine. This is in addition to the 6 UoC of General Education courses required by all UNSW students to be studied in year 3 (see Section 2.1.4 below). The aim of the flexible course is to encourage breadth of learning by allowing students to pursue study in an area of their own interest. This need not be relevant to their medical studies, but students can submit achievement in the flexible course in their portfolio review, as one piece of evidence for achievement of one or more of the relatively generic graduate capabilities of the Medicine program (see Section 3).



During the academic session in which students enrol in the flexible course, they will only be permitted to complete one phase 2 'clinical' module, study of which can be completed over 16 weeks rather than 8 weeks.

Independent Learning Project (ILP)

This is described in more detail in Section 2.1.4 below. Briefly all students must complete a total of 24 weeks in-depth study of one area of interest relevant to their Medical studies. This can commence any time after the end of phase 1. Many students will commence their ILP during phase 2, although it is possible to defer commencement until phase 3. Thus, the duration of phase 2 (and transition point to phase 3) may vary between individual students, depending upon the structure and timing of their ILP.

Phase 3: Independent Reflective Learning

Phases 1 and 2 aim to gradually develop the abilities of students to reflect on experience, be inquisitive, curious and open-minded, evaluate and critically analyse a range of data, including clinical observations, and possess excellent communication skills. By the end of phase 2, students will have obtained a thorough understanding of the scientific principles that underlie health, disease and approaches to disease management, and they will be confident independent learners. They will be well prepared to learn more independently by doing and reflection on their experiences. In phase 3, through traditional and innovative attachments to clinical units, students will be encouraged to increasingly become involved in supervised 'real work' as part of clinical teams.

Phase 3 consists of 10 x 8-week modules representing more traditional clinical clerkships, but still includes relevant content from the basic medical and social sciences. The settings for these experiences will represent a balance within hospitals, ambulatory practice and those involving both.

As shown in figure 1 (p. 47), the four organising domains of the program will continue to exert an organizing function in phase 3, but students will recognise that there is substantial overlap between them. Nevertheless, many learning resources that were explicitly used by students in phase 1 and 2 will remain highly relevant in phase 3, and reinforce the relevance of the basic sciences to clinical practice.

To allow ongoing flexibility in the design of clinical experiences, the phase 3 courses are named as Clinical Modules 1-12. These courses collectively comprise the Phase 3 clinical program. All students will enrol in Clinical Modules 1-9 and may enrol in additional courses, depending on whether they have undertaken earlier individualised study programs or have been granted any exemptions.

Clinical learning in phase 3 will be predominantly located in clinical environments associated with the Faculty of Medicine in a range of metropolitan and rural locations throughout New South Wales. Most modules will be available in a variety of clinical locations and students will be able to select an individualised learning program from a menu offered by clinical teaching units, or they may be able to negotiate their program with their clinical supervisors. Students will generally be able to indicate a preference to do the majority of their clinical training attached to one geographical region, but final allocation will be determined by a number of factors including availability of attachments to particular locations, and is ultimately the responsibility and decision of the Faculty.

In considering their selection of Clinical Modules, students are required to complete one each with a specified major focus, these being in the clinical disciplines of Children's Health; Women's Health; Mental Health; Internal Medicine; Surgery; and Chronic & Complex Care. Choice of the structure, case-mix and location of each of these will generally be possible. The student's phase 3 experience must also include a minimum of 8 weeks in community or ambulatory settings, as well as 8 weeks experience of emergency or critical care, although these may be spread over one or more individual modules. In addition, a student's combined clinical experiences during phases 2 and 3 must include a minimum of 8 weeks in rural locations, 4 weeks in primary care practice and adequate exposure to various clinical sub-specialities (table 3).

Table 3 - Requirements for Phase 3

To complete phase 3, students must pass all relevant assessments and complete a minimum of 9 phase 3 modules. The composition of these must include the following:

At least 1 of each clinical discipline type in column A

The experiences selected must include a total of 8 weeks experience in each location shown in column B

Students must have gained experience in the areas listed in column C in either phase 2, phase 3, or the independent learning project (ILP).

A Clinical Discipline	B Location/Setting	C Phase 2 or 3 or ILP
Internal Medicine	Rural (between phase 2 & 3)	Primary Care (min. 4 weeks)
Surgery	Community/Ambulatory	ENT, Dermatology, Ophthalmology
Mental Health	Emergency/Critical Care	
Children's Health		
Women's Health		
Chronic/Complex Care		

All clinical modules in phase 3 adopt the principles of clinical clerkship, in which students learn through experience and participation in the treatment of patients under the care of medical practitioners and/or medical teams to which they are attached. Although structured teaching activities are generally limited to an average of 10 hours per week, which will include teaching of relevant biomedical sciences and social sciences, students are required to work under supervision as part of the health care delivery unit. Students' responsibilities as part of the team will increase gradually as new skills are developed. Each module will have demonstrable links to those aspects of basic biomedical and social sciences relevant to the health issues encountered.

Extended Rural Clinical Experience (ERCE)

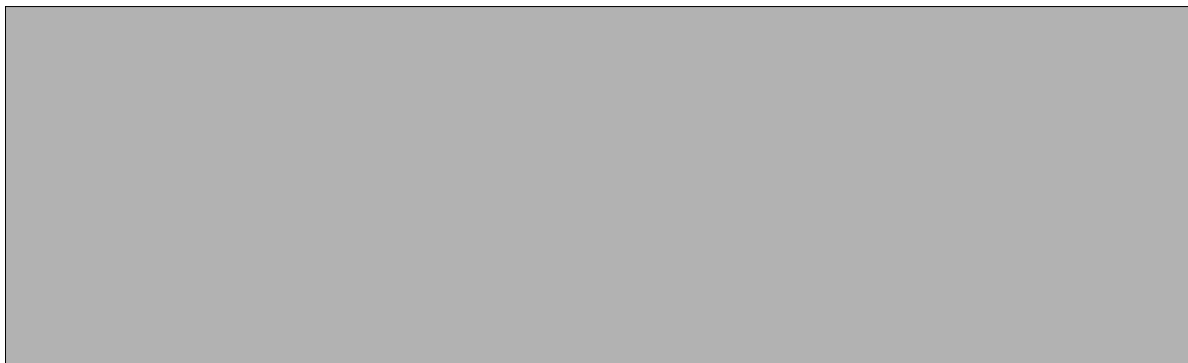
The School of Rural Health was formally established as a School within the Faculty in 2000, and is currently expanding its capacity to train students so that 25% of HECS-funded UNSW medical students will be able to have an extended rural clinical experience (ERCE) that represents approximately one half of their 'clinical' learning (see also Section 6.2).

Currently, students undertaking an ERCE complete all of year 4 and half of either year 5 or year 6 within the School of Rural Health (54 weeks). In the new program, ERCE students will be required to complete *the equivalent of 7 x 8-week phase 2 or 3 blocks* in a rural location (56 weeks). The ILP (see below) may be completed in a rural location but will not contribute to these 7 blocks.

Flexibility, Student Choice, Electives and Combined Degree Programs

Independent Learning Project

All students are required to engage in an Independent Learning Project (ILP) of 24 weeks duration (3 blocks). This project will offer scope for in-depth study in a variety of possible settings, ranging from laboratory-based work in the biomedical sciences to, for example, audits of clinical practice, projects dealing with cross-cultural issues, health economics, medical ethics, or medico-legal questions which may be undertaken outside the Faculty of Medicine. The ILP can be taken any time after completion of phase 1, either as 3 sequential blocks, or any other combination (eg: 1 block in each of years 4, 5, and 6). One possible example was shown in Figure 3 (page 51), where the student takes five blocks to complete Phase 2, then proceeds to 3 continuous blocks of ILP, before proceeding to Phase 3 at start of year 5. An alternative program is shown on the next page, where the student completes 3 x Phase 2 blocks in year 3, then takes the ILP over 3 years, one block per year.



Exemptions for the ILP will be given to students with a prior research experience, or those enrolling in a BSc.(Med) Honours program. Further details of the ILP and BSc.(Med) Honours experiences are described in Section 8.

Year	Summer Term	Session 1		Session 2		
		Term 1	Term 2	Term 3	Term 4	
1						Phase 1
2						
3		RE-2	HM-3	SH-3	RE-3	GE
4	ILP-1	BGD-3	Flexible	Phase 3	Phase 3	Phase 3
5	ILP-2	Phase 3	Phase 3	Phase 3	Phase 3	
6						

Figure 4

General Education and non-MBBS Courses

All students enrolled in undergraduate degrees at UNSW are required to complete 6 units of credit (UoC) of General Education in each of years 2 and 3 (total 12 UoC). Students in the new Medicine program are also required to complete a further 12 UoC in courses offered by a Faculty or Faculties other than Medicine. To facilitate enrolment in these courses, it will be possible for any one module in Phase 2 to be undertaken over a 16 week period, allowing concurrent enrolment during phase 2.

The total MB,BS program consists of courses totalling 288 UoC (6 x 48/year). All students will undertake 24 UoC in courses outside the Faculty of Medicine and the option exists for an additional 24 UoC to be taken outside the Faculty of Medicine in the Independent Learning Project. The nine modules in Phase 1 are compulsory and an additional 10 modules are compulsory in Phases 2 and 3 (totalling 200 UoC) although all of these have internal flexibility. The remaining modules are made up of electives chosen from a list of options. Thus 17% of the units of credit are able to be taken in courses outside the discipline of the degree and only 69% of the program is made up of prescribed courses.

Electives

At least one elective block should be included in phase 3. The duration of the elective will be 8 weeks and this may be taken as one block of 8 weeks, or may be broken into 2 attachments of appropriate length for the experience sought.

The elective term may include work in:

- any school or department within the Faculty of Medicine;
- in a hospital or medical institution either in Australia or in another country;
- with a medical practitioner either in Australia or in another country.

Students may choose from the following:

- to further develop knowledge and skills in Medicine and/or Surgery;
- to acquire preliminary training for a career in a specialty of medicine;
- to experience a different pattern of health care delivery from that practised in Australia;
- to obtain experience that may influence subsequent career orientation;
- to correct deficiencies perceived by students in their undergraduate program;

Students make their own individual arrangements for electives and are advised that some overseas governments, health authorities and/or hospitals require very early applications, accompanied by certification that the applicant is an enrolled medical student of the University who is eligible to undertake the specified term. When making the arrangements, it is requested that an appropriate person is willing to act as a supervisor. The supervisor is asked to submit a report to the Faculty Office by the end of the term.

The choice of elective together with details of the placement(s) and supervisor(s) are submitted to the Office of the Dean for approval.

Each student is required to produce a report, approximately 1000 words in length, which describes the nature of the work done during the Elective Term. The student and supervisor reports will be forwarded to the relevant Clinical Associate Dean for a decision as to whether the student has completed a satisfactory term, and thereafter to the Assessment Committee.

Combined Arts/Medicine Program (BA MB,BS)

The current Arts/Medicine program [BA BSc(Med) MB,BS (7 years)] has been a significant success, with increasing demand in recent years. The availability of this program contributes to the appeal of UNSW Medicine to potential students and a new BA MB,BS program has been developed to operate with the new Medicine program.

After completing Year 1 of the Medicine program, students will undertake 66 UoC of courses in the Faculty of Arts & Social Sciences, including a major sequence. A sample program illustrating how this would be achieved is shown in section 2.8. Students in the BA MBBS program will not be required to complete General Education courses or other courses outside the Faculty of Medicine. They will usually complete the requirements for the BA after 3.5 years. Upon rejoining the Medicine program they will undertake a short clinical skills refresher course. Students wishing to undertake a full year of research in Arts will be able to enrol in the BA Honours program 3401. These students will be exempt from undertaking the Independent Learning Project and will thus complete the combined program in 7.5 years.

2.2 Scientific method

STANDARD 2.2.1

The curriculum is based upon the principles of scientific method and evidence-based practice, and inculcates analytical and critical thinking.

Inclusion of 'evidence-based medicine' in the curriculum provides a model for the ongoing independent learning that is necessary to address specific patient care needs by medical practitioners throughout their professional careers. Critical thinking and analytic problem-solving skills are fostered by example, and role modelling by tutors who guide the students

through recognised steps which relate to the methods, processes and the control of bias which are part of the scientific method. By their acquisition of skills and practising the tasks, students will be assisted to see the value of problem analysis as empowerment for assisting patients deal with difficult management issues and hence engage them.

Learning in evidence based medicine will be integrated through the entire undergraduate medical curriculum.

In summary, students will be learn to:

- Formulate clinical questions i.e convert the need for information into an answerable question.
- Search for evidence i.e skilfully track down the best patient-centred research evidence using a variety of databases (such as Medline, Cochrane Database of Systematic Reviews).
- Undertake a critical appraisal of the evidence – validity, impact and applicability.
- Apply the evidence – integrate the critically appraised evidence, with clinical expertise and a patient's unique biology, values and circumstances to arrive at an evidence based clinical decision that is most appropriate to the individual circumstances.
- Evaluate their own effectiveness and efficiency in terms of executing steps 1 – 4.

The learning will be vertically integrated so that as students move through the program, they will:

- experience an increasing sophistication of issues
- refine essential EBM skills
- acquire more advanced knowledge
- move from the application of EBM in scenario based learning to its application in the care of real patients and
- undertake self-evaluation at all stages

The Foundations block, which comprises the first eight weeks of the new curriculum, will provide a framework for students to identify information needs and to approach the process of meeting those needs in a logical and systematic manner. Throughout this block, learning activities are designed to foster the development of independent, effective and efficient information retrieval skills and to encourage critical evaluation of information resources.

The specific objectives for each of the 3 Phases of the new medical curriculum are as follows:

At the end of Phase 1, students will be able to:

- undertake a critical appraisal of a scientific paper to evaluate the validity a study, and to understand the results and what they mean.
- formulate a clinical question from a clinical scenario (e.g what are the risk factors, useful diagnostic features, best therapy, prognosis).

- identify the best study type to answer a clinical question.
- apply EBM concepts to the development of clinical skills (i.e using EBM to determine the validity and usefulness of clinical signs).
- evaluate one's own performance at formulating a clinical question, finding relevant information and critical appraisal

¹ This implies an understanding of confidence intervals, p-values and power and an ability to calculate sensitivity, specificity, likelihood ratios, RRR, ARR and NNTs.

At the end of Phase 2, students will be able to:

- formulate a clinical question arising from clinical environment based learning (i.e. asking questions in real time from real patients)
- carry out Medline searching effectively and in a time efficient manner, having built on the skills learnt in Phase 1.
- undertake searches in the EBM databases.
- undertake a critical appraisal of a systematic review
- undertake evaluation of a clinical guideline
- be very familiar with typical EBM terms, and to be able to undertake calculations from the data provided in a scientific paper to obtain NNTs and post-test probability
- be familiar with EBM web resources and EBM calculators
- undertake a presentation of a critically appraised topic to answer a clinical question.
- evaluate one's own performance at asking focussed clinical questions that are relevant to real patients, at locating and appraising relevant information in a time efficient manner, and at answering clinical questions.

At the end of Phase 3, students will be able to:

- formulate a clinical question from a real patient for which the student has care responsibility
- use Pub Med, Sumsearch, CIAP or other resources available to clinicians in private practice, to answer clinical questions
- share information gained from the literature with individual patients in a way which is comprehensible to patients
- appreciate the unique preferences and choices of individual patients in therapeutic decision making
- integrate and apply the critically appraised evidence with the patient's unique values and circumstances to arrive at an evidence based decision that is most appropriate for that individual patient.
- evaluate the information supplied by pharmaceutical companies through advertising material and drug representatives, and to recognise the influences that may impact on clinical decision making.
- undertake evidence based presentations for journal clubs, clinical grand

rounds and clinical group meetings.

- demonstrate advanced understanding of an aspect of evidence based medicine gained through an independent learning project (e.g develop a systematic review, design an RCT), undertake a clinical audit
- evaluate one's own performance at informed decision making

2.3 Basic biomedical sciences

STANDARD 2.3.1

The curriculum includes those contributions of the basic biomedical sciences that enable understanding of the scientific knowledge, concepts and methods of clinical science.

As described in Sections 1.4 and 3, '[Using Basic and Clinical Science in the Practice of Medicine](#)' is one of the 8 desired graduate capabilities that help structure the program and the assessment process. Teaching and learning of basic biomedical sciences is prominent in all 3 phases (page 38).

The program has been designed by multi-disciplinary groups that include clinicians, basic scientists, physician-scientists, and public health professionals. A curriculum map will be available with the Stage 2 submission to indicate contributions of the following biomedical science disciplines:

- Biochemistry and Cell Biology
- Medical Genetics
- Anatomy
- Physiology
- Pharmacology
- Pathology
- Microbiology and Immunology

The design of specific modules in the program is occurring in consultation with the Biomedical Sciences Content Stream Group that includes representation from all the disciplines described above.

One approach that has been taken to ensure that teaching and learning of biomedical sciences continues throughout all phases of the program is through the assessment system (Section 3). Integrated teaching in biomedical sciences in phase 1 will be assessed in cross-disciplinary written and practical examinations; in phase 2 there will be assessment of clinical case-based projects that requires students to demonstrate the scientific mechanisms leading to illness; while the major examination in phase 3 will include a multi-station oral assessment correlating biomedical sciences and clinical work. The modular structure of the program will allow a significant degree of flexibility to adapt specific content to developments in biomedical science.

2.4 Population health

STANDARD 2.4.1

The curriculum addresses population health issues.

As described in Sections 1.4 and 3, '[Understanding the Social Aspects of Health and Disease](#)' is one of the 8 desired graduate capabilities that help structure the program and the assessment process. Teaching and learning of social determinants of health and illness and population health is prominent in all 3 phases (page 39). Although represented in all domains, learning of these issues is particularly focused in Society and Health.

The emphasis in Society and Health - Phase 1 is on learning some of the fundamental language, concepts and issues of this capability. In phase 2, there is a transition to action, with students engaging in community-based projects in the Society and Health-3 block.

2.5 Behavioural and social sciences and medical ethics

STANDARD 2.5.1

The curriculum includes those contributions of the behavioural sciences, social sciences, medical ethics and medical jurisprudence that enable effective communication and teamwork, clinical decision-making and ethical practices.

As described in Sections 1.4 and 3, '[Understanding the Social Aspects of Health and Disease](#)', '[Understanding ethics and legal responsibility in Medicine and acting in an ethical and socially responsible manner](#)', '[Effective communication](#)' and '[Teamwork](#)' are 4 of the 8 desired graduate capabilities that help structure the program and the assessment process. Teaching and learning in these areas is prominent in all 3 phases (pages 39, 41, 42 & 44). Although learning in these areas of medical education programs has traditionally been difficult to assess, it is hoped that the introduction of a portfolio assessment system will address this challenge (Section 3).

The program is being developed in consultation with the following groups who are responsible for ensuring that these 4 capabilities are developed in a co-ordinated fashion throughout the program, and that teaching and learning activities in each phase are linked vertically.

- Communication and Clinical Skills Working Party
- Medical Ethics Working Party
- Evidence-Based Medicine Advisory Group (see also Section 2.2)

Input has also occurred from:

- Population Health Group within the School of Public Health and Community Medicine
- Social Aspects of Health Content Stream Group (includes Behavioural Sciences, Medical Ethics, Public Health, and Health Systems)
- Centre for Multicultural Health within the School of Public Health and Community Medicine

Cultural competence is being woven into the teaching and learning process across the new curriculum through all three phases in all four domains, underpinning biomedical, clinical and public health aspects of the program. Currently the development of Phase 2 learning activity designs are in progress and the emphasis on cultural competence is in the context of clinical presentations. Students are encouraged to draw on their personal experiences of health and illness wherever possible. Discussions have been held with a view to linking ethnic/cultural issues with indigenous and rural and remote themes. Partnerships with NGOs and consumer organizations are being developed, through which students will be given exposure to practicums and externships with ethnic communities, Migrant Resource Centres, community outreach services of the NSW Cancer Council and interagency networks. Arrangements for students' co-supervision are under development.

The modular structure of the program will allow a significant degree of flexibility to adapt specific content to developments in understanding of the social aspects of health and illness, and utilise contemporary issues to explore students' ethical frameworks and moral reasoning.

2.6 Clinical sciences and skills

STANDARD 2.6.1

Students have sufficient patient contact to acquire the clinical knowledge, skills and professional attitudes necessary to assume appropriate clinical responsibility in Australia and New Zealand upon graduation.

As described in Sections 1.4 and 3, '[Patient Assessment and Management](#)' is one of the 8 desired graduate capabilities that help structure the program and the assessment process. Teaching and learning of clinical medicine, clinical communication, clinical reasoning and clinical skills is prominent in all 3 phases (page 40).

Phase 1 - Early Clinical Experiences

A Communication and Clinical Skills Working Party is developing a vertically-integrated program for the teaching and learning of these essential capabilities. This program will be horizontally integrated with other teaching activities and made relevant to the learning contexts in each phase of the program. In designing the program, there is an emphasis on both introspective as well as interactive aspects of communication.

A feature of the new Program is early contact with patients commencing in the first year. Phase 1 students will spend the equivalent of 4 days per 8 week block in clinical environments. During these clinical experiences, students will receive teaching from clinical tutors on fundamental aspects of clinical communication and elementary clinical skills, as well as having opportunities to interact with patients independently. These fortnightly clinical visits will alternate with campus-based communication workshops, where students will have opportunities to learn more generic communication issues.

During this initial early contact with patients, the emphasis for the student will initially focus on understanding the impact of the illness or disability on the patient, rather than formal symptom analysis or diagnostic considerations.

The paradigm for the student in these early patient encounters is:

- Demonstrate respect for the patient
- Learn about this patient's background
- Elicit the impact that the illness/disability has had on this patient and his/her family

Phase 2 - Clinical Experiences as the Basis for Learning

In phase 2, students will spend at least 60% of their time in clinical locations. By the end of phase 1, students' clinical communication abilities will be sufficient that they are comfortable in approaching patients independently, are able to take structured clinical histories, and can perform systematic physical examinations. Throughout phase 2, their clinical skills will be further developed as they participate in a range of patient experiences. These experiences form the basis of case-based tutorials, designed to reinforce their learning of the social and scientific mechanisms leading to illness, as well as early development of clinical reasoning and knowledge of the natural and modified courses of important diseases.

Phase 3 - Enhanced Responsibility within Clinical Teams

Phase 3 comprises 80 weeks of practical learning in a range of clinical environments. The structure and mix of these experiences and settings for learning is described in section 2.1 (page 57). Phase 3 embodies the principles of clinical clerkship with an emphasis on devising experiences that confer real responsibility for patient care to students. The learning program is embedded in real experiences of students and is not embellished with 'paper' or other constructed scenarios for learning. As such, the Faculty recognises that the experiences of individual students may be different but favours a learning program embedded in patient contact that encourages students to learn by doing. This approach more closely matches the way medical practitioners learn throughout their professional careers.

2.7 Patient safety and quality assurance

STANDARD 2.7.1

The curriculum addresses patient safety and quality assurance of medical care.

The issue of patient safety is introduced in the very first learning activity of the Foundations program, when students engage in a scenario that reviews their own immunisation status. This is combined with a Faculty program to ensure students are adequately immunised and aware of the obligations with respect to blood-borne viruses (see also Section 4.3).

The teaching and learning of procedural skills is currently undergoing review. Skills acquisition includes a range of patient safety issues ranging from hand-washing and infection control, to informed consent for invasive procedures. The outcome will be that all students will be required to be certified at a certain level of competence in procedural skills in a skills laboratory prior to performing procedures on patients.

Teaching and learning about Health Care Systems will occur in Phase 1, in Society and Health-1 and -2. Students will be introduced to the following aspects of Health Care Systems: - overview, intersectoralism, policy, structure, economics and funding, systems dynamics, problems, and conclusion. In the 'A' half of the phase 1 program, the focus will be on the Australian health care system. In the 'B' half of the program, the focus will be on a comparative health system, outside Australia. (see also the Graduate Capability statements 1.2.5, 1.2.6, 1.5.5, and 3.5.1).

2.8 Curriculum structure, composition and duration

STANDARD 2.8.1

The medical school has developed descriptions of the content, extent and sequencing of the curriculum that guide both staff and students on the level of knowledge and understanding, skills and attitudes expected of students at each stage of the course.

Admission procedures are described in Section 4.1

Program structure

The duration of the Medicine program is normally 6 years. In years 1-3 it comprises 4 × 8-week blocks (terms), with the start of term 1 coinciding with the beginning of the University-wide academic session 1 and the start of term 3 coinciding with the beginning of session 2. In years 4-6 there are 5 × 8-week blocks, with an additional summer term completed before the commencement of session 1.

Most teaching is in modular form, integrated across traditional disciplines, with each module being allocated a course code. Courses therefore usually correspond to an 8-week module, rather than the sessional arrangement applicable to most UNSW courses. However, in general the standard UNSW program load of 48 units of credit (UoC) per year will apply, with most 8-week modules being treated as 10 UoC. As part of the program, students are required to complete 12 UoC of General Education courses (unless exempt under UNSW rules) which may be available as sessional courses or in block mode. Students are also required to undertake 12 UoC of elective courses in a Faculty or Faculties other than Medicine (Flexible Course).

The program is organised into three phases. Phase 1 includes an initial Foundation Learning module, followed by 8 × 8-week modules focusing on basic medical sciences in relation to the human life cycle; social, ethical and legal issues related to health care; and early experience in clinical or other health-related environments. The 8 courses are Society & Health 1 and 2; Beginnings, Growth & Development 1 and 2; Health Maintenance 1 and 2; and Regressions & Endings 1 and 2. Course descriptions and details of teaching and learning activities are provided in Appendix 5 and 6, Volume 2.

Phase 2 consists of a minimum of 4 × 8-week modules, (Society & Health 3; Beginnings, Growth & Development 3; Health Maintenance 3; and Regressions & Endings 3) with increased clinical content and an emphasis on correlation between prior and current learning.

Phase 3 consists of a minimum of 9 × 8-week modules with a clinical focus, but still includes relevant content from the basic medical sciences and the social sciences. Six of the modules have a specified major focus (Children's Health/Women's Health/Mental Health/Internal Medicine/Surgery/Chronic & Complex Care) although each such module will be available in a variety of clinical environments (e.g. metropolitan teaching hospital/community-based/rural/emergency care) and all will provide a cross-disciplinary learning experience. The remaining modules are electives or selectives. The order and content of Phase 3 modules is organised for each student on an individual basis through the relevant Clinical School(s).

The sequence of courses in Phase 1 is fixed, but they have considerable flexibility built into them. In phases 2 and 3, students will have the opportunity to individually tailor the sequence and content of the courses they undertake, to match their interests and needs.

In all phases of the program, students will be required to travel to various clinical environments associated with UNSW, which will be the predominant locations for learning in phases 2 and 3. These locations include Clinical Schools associated with St. Vincent's Hospital, Darlinghurst; St. George Hospital, Kogarah; the Randwick Campus Hospitals; various locations in the South West Sydney Clinical School based around Liverpool; and the School of Rural Health, which has campuses in the Murray Valley, and mid-North Coast areas. Throughout the program, students may be attached to multiple sites, which will typically include at least 8 weeks in a non-metropolitan setting.

After completing Phase 1, all students will be required to undertake an Independent Learning Project, comprising 3 × 8-week blocks, which may or may not be taken consecutively. This project offers scope for in-depth study in a variety of possible settings, ranging from laboratory-based work in the biomedical sciences to, for example, clinical audits, or projects dealing with cross-cultural issues or health economics, which may be undertaken outside the Faculty of Medicine.

Students wishing to undertake a full year of research will be able to enrol in the BSc (Med) Honours program 3831. These students will be exempt from undertaking the Independent Learning Project and will thus complete the combined program in 6.5 years. Exemption will also be granted to students who have previously completed a research Honours program or higher research degree, or a Masters degree with a significant research component, or who can otherwise demonstrate acceptable evidence of independent study or research at a tertiary level. These students will complete the Medicine program in 5.5 years.

MB BS program

A sample program, illustrating the sequence of modules and other courses that might be undertaken by a typical student, is shown below. Note that the timing of the Independent Learning Project may vary and that because of the flexibility in terms of the transition from Phase 2 to Phase 3, the actual number of clinical modules taken in Phase 3 may also vary slightly. In general, the hours of student work associated with an 8-week module are considered to be equivalent to 10 Units of Credit (UoC). However, there are two variations to this general formula: (a) because the Faculty recognises that the initial transition to university and the first iteration of the integrated modules in Phase 1 will pose special demands, the first five modules have each been allocated 12 UoC (b) the blocks for the Independent Learning Project have each been allocated 8 UoC.

Year	Summer Term	Session 1		Session 2			
		Term 1	Term 2	Term 3	Term 4		
1		Foundations (12 UoC)	SH-1 (12 UoC)	BGD-1 (12 uoC)	HM-1 (12 UoC)	Phase 1	
2		RE-1 (12 UoC)	SH-2 (10 UoC)	BGD-2 (10 uoC)	HM-2 (10 UoC)		GE (6 UoC)
3		RE-2 (10 UoC)	HM-3 (10 UoC)	SH-3 (10 UoC)	Flexible (12 UoC)		GE (6 UoC)
4	ILP-1 (8 UoC)	BGD-3 (10 uoC)	RE-3 (10 UoC)	Clin Mod-1 (10 UoC)	Clin Mod-2 (10 UoC)	Phase 3	
5	ILP-2 (8 UoC)	Clin Mod-3 (10 UoC)	Clin Mod-4 (10 UoC)	Clin Mod-5 (10 UoC)	Clin Mod-6 (10 UoC)		
6	ILP-3	Clin Mod-7	Clin Mod-8	Clin Mod-9	Clin Mod-10		

Figure 5 – Sample Program showing Courses and Units of Credit (UoC)

All students in the MBBS program will be required to complete 6 UoC of General Education in each of years 2 and 3, as well as 12 UoC in courses offered by a Faculty or Faculties other than Medicine. To facilitate enrolment in these courses, it will be possible for any one module in Phase 2 to be undertaken over a 16 week period, allowing concurrent enrolment typically in session 2 of year 3 of the program.

The resultant structure in terms of UoC is as follows:

Stage 1	48 UoC
Stage 2	48 UoC
Stage 3	48 UoC
Stage 4	48 UoC
Stage 5	48 UoC
Stage 6	48 UoC

Program total 288 UoC

BA MB BS (Arts/Medicine) program

After completing Year 1 of the Medicine program, students will undertake 66 UoC of courses in the Faculty of Arts & Social Sciences, including a major sequence. A sample program illustrating how this would be achieved is shown below.

Year	Summer Term	Session 1		Session 2			
		Term 1	Term 2	Term 3	Term 4		
1		Foundations (12 UoC)	SH-1 (12 UoC)	BGD-1 (12 UoC)	HM-1 (12 UoC)	Phase 1	
2		RE-1 (12 UoC)	SH-2 (10 UoC)	BGD-2 (10 UoC)	HM-2 (10 UoC)		Arts (6 UoC)
3		RE-2 (12 UoC)	Arts (12 UoC)	Arts (24 UoC)			
4		Arts (24 UoC)		SH-3 (10 UoC)	HM-3 (10 UoC)	Clinical Refresher (4 UoC)	
5	ILP-1 (8 UoC)	BGD-3 (10 UoC)	RE-3 (10 UoC)	Clin Mod-1 (10 UoC)	Clin Mod-2 (10 UoC)	Phase 3	
6	ILP-2 (8 UoC)	Clin Mod-3 (10 UoC)	Clin Mod-4 (10 UoC)	Clin Mod-5 (10 UoC)	Clin Mod-6 (10 UoC)		
7	ILP-3 (8 UoC)	Clin Mod-7 (10 UoC)	Clin Mod-8 (10 UoC)	Clin Mod-9 (10 UoC)	Clin Mod-10 (10 UoC)		

Figure 6 – Sample Arts/Medicine Program

Students in the BA MBBS program will not be required to complete General Education courses or other courses outside the Faculty of Medicine. They will usually complete the requirements for the BA after 3.5 years. Upon rejoining the Medicine program they will undertake a short clinical skills refresher course.

The resultant structure in terms of UoC is as follows:

Stage 1	48 UoC
Stage 2	48 UoC
Stage 3	48 UoC
Stage 4	48 UoC
Stage 5	48 UoC
Stage 6	48 UoC
Stage 7	48 UoC

Program total 336 UoC

Handbook Course descriptions are provided in Appendix 5, Volume 2.

Table 4 - Weekly Student Contact Hours

Learning Activity	Phase 1	Phase 2	Phase 3
Lecture	6	2	1
Content-specific tutorial	1	2	2
Laboratory Practical	4	3	
Facilitated Tutorial	3-4	3-4	3
Communication/Clinical Tutorial	3	4	4
Total	17	15	10

STANDARD 2.8.2

Basic sciences and clinical sciences are integrated appropriately in the curriculum.

As described previously, the program is highly integrated in both horizontal and vertical aspects.

2.9 Course management

STANDARD 2.9.1

The curriculum committee has the responsibility, authority and capacity to plan, implement and review the curriculum to achieve the objectives of the medical course.

The Curriculum Development Committee (CDC) is the coordinating body for the development of the new medical education program at UNSW. This committee develops policy and considers proposals recommended by various curriculum working parties and design groups.

The Office of Medical Education

Coordination of the design and implementation of the new Medicine program rests with the Office of Medical Education (OME), a unit within the Office of the Dean. The OME is headed by the Associate Dean, Medical Education (ADME), currently Associate Professor Patrick McNeil, appointed in February, 2001 for an initial 3 year term. The OME coordinates and oversees the activities of a number of curriculum working parties, design groups and advisory groups. These groups can be considered conceptually within three general divisions (see page 5). The first group comprises multi-disciplinary representatives who are designing individual courses (8-week blocks) within the program. The second comprises groups responsible for considering content, capabilities, or learning throughout the program to ensure vertical integration. The third comprises groups with a more overall coordinating role of specific aspects. The chairs of each group are shown in brackets.

- **Course Design and Implementation Groups** - Each 8 week block of the new program is a designated 'course' (subject) with its own course code. There are currently 5 phase 1 course design groups, 4 phase 2 course design groups, 1 phase 3 course design group, and a group to design the independent learning project.
 - Foundations (Tessa Ho)
 - Society and Health-1/2 (Debbie Black, Stephen Riordan)

- Beginnings, Growth & Development-1/2 (Karen Gibson, Noel Whitaker)
- Health Maintenance-1/2 (George Mangos, Phil Waite)
- Regressions & Endings-1/2 (Jan Maree Davis, Chris Hughes)
- Society and Health-3 (Mark Harris, Anna Whelan)
- Beginnings, Growth & Development-3 (Anna McNulty)
- Health Maintenance-3 (Michael Grimm, Phil Jones)
- Regressions & Endings-3 (Andrew Cole, Ros Poulos)
- Independent Learning Project-1-3 (Debbie Black)
- Phase 3 Design Group (TBA)

The design groups have responsibility for design and implementation of the courses for which they are responsible. They are assisted in this task by input from Content Stream Advisory groups. Courses are approved by the Curriculum Development Committee, which has final responsibility for planning and implementation.

- **Content Stream Advisory Groups** - There are a number of groups who are responsible for a vertical view of the program and have responsibility for aspects of the 3 content streams and how they relate to the relevant graduate capabilities. These groups include:
 - Biomedical Sciences Content Stream Group
 - Social and Behavioural Aspects of Health Content Stream Group
 - Medical Practice Content Stream Groups
 - Communication and Clinical Skills Working Party (John Ham)
 - Psychomotor Skills Working Party (Eva Segelov)
 - Evidence Based Medicine Advisory Group (Ros Poulos)
 - Medical Ethics Advisory Group (Paul McNeill)
- **Other Groups** - Responsible for larger overview or coordinating activities
 - Selection Working Party (Andrew Cole)
 - Assessment Working Party (Tony O'Sullivan)
 - Educational Technology Coordination Group (Patrick McNeil)

All the above groups report to the Curriculum Development Committee (CDC), which is the key formal Faculty structure responsible for coordinating activities and making decisions about the new Medicine program.

Proposals approved at CDC are presented to the Faculty Education Committee for approval and implementation. If required, recommendations are further tabled at Faculty Standing Committee and Faculty Board for approval.

The other key committee involved in curriculum planning is the Clinical Medical Education Committee (CMEC), which has responsibility for the Clinical Program of the current curriculum. Because it is intended to transform the current year 4-6 program into the new phase 2-3 program over the next 3 years, the CMEC considers these types of curriculum issues. Both CDC and CMEC are subcommittees of the Education Committee. The Associate Dean, Medical Education chairs the Education Committee, the CDC and the CMEC.

STANDARD 2.9.2

The curriculum committee includes representation from staff, students and other stakeholders.

The Curriculum Development Committee (CDC) is empowered to coordinate decisions for the new Medicine program. It reports to the Faculty Education Committee.

Presiding Member

Associate Dean (Medical Education) A/Prof Patrick McNeil

Membership

Professor Bruce Dowton	Dr Andrew Cole
Professor Richard Henry	Dr Peter Harris
Professor Stephen Deane	Dr Stewart Head
Professor Phil Mitchell	Dr Michele Joseph
Professor Rakesh Kumar	Dr Sybil Perlmutter
A/Prof David de Carle	Dr Liz Tancred
A/Prof Debbie Black	Dr Peter Vine

Student representation is via the Education Committee and its sub-committees. Students are represented on the following sub-committees: Rural Health Education Committee, Pre-Clinical Education Committee, Clinical Medical Education Committee, and the Education Committee.

2.10 Linkage with subsequent stages of medical education, training and medical practice

STANDARD 2.10.1

Operational links are fostered between the basic medical course and the subsequent stages of training.

As discussed in Section 1.4 after Standard 1.4.2 (page 46), a specific module for intern preparation is being designed to address issues that have become apparent in research performed with recent graduates.

The need for more complete preparation of senior medical students for their intern experience has long been recognised, and a number of studies in the UK and USA have identified deficiencies in training that might be addressed in such a program. Research conducted on recent UNSW graduates yielded a number of surprises with issues about handling uncertainty, change, profound new stressors and the need for flexibility being highlighted.

The 'Preparation for Internship' module will utilise facilitated group sessions to identify issues such as time management and task prioritisation, "difficult" patients and families, long hours and frequent overtime shifts, and fatigue, as problem areas likely to confront new graduates. Training in skills to manage these issues will be a core feature of this module. In addition, identification of situational (such as high workload) and systemic (eg. budgetary, nursing shortage) pressures impinging on personal performance and ethics will be encouraged, and approaches developed to maximise the likelihood that graduates will maintain clinical and ethical integrity in the face of these challenges.

A number of other deficiencies identified by recent UNSW medical graduates will be addressed in the module. These include examining and recognising personal limitations, and thereby learning when it is appropriate to defer clinical problems to more senior staff. Moreover, an ability to handle unexpected findings and prolonged uncertainty in the clinical interaction is inadequately handled in current training and will be highlighted in “intern preparation”. Team skills will be strengthened to ensure some familiarity with conflict resolving abilities. Finally, self-development will be targeted through identification of future postgraduate learning needs (both as junior medical officer and as career trainee), and strategies and skills developed to facilitate transition to new learning styles demanded by future career choices. These will reinforce the skills in lifelong learning already inculcated throughout the curriculum

A major flaw perceived by new graduates is a lack of training in the recognition of stress, fatigue and workload issues, and the impact of these on clinical performance and personal ethics.

In addition to addressing these issues in a specific “Intern preparation” module, however, there is a planned program within individual clinical schools of “subinternship”, running through the final year of the course. This will be modeled on a program already in place in one of the UNSW clinical schools. Specific, well-supervised ward rotations will utilise final year students in parallel with current interns, to carry out typical intern ward duties. Patient loads will be shared, full time working hours along with overtime shifts will be used and clinical decision making will be encouraged. In fact, all intern requirements (except those unable to be performed for legal reasons, such as ordering of medications or pathology tests) will be met by these “subinterns”. The strength in such a program is in the practical exposure of students to the stresses of internship alluded to above, in a strictly clinical but well supported setting. The organisational aspects of this program will be coordinated between the hospital Directors of Clinical Training and Postgraduate Education Committees, and UNSW medical faculty representatives.

STANDARD 2.10.2

The curriculum committee seeks input from the environments in which graduates will be expected to work, and modifies the medical course in response to feedback from those responsible for subsequent stages of training and from the community.

As highlighted above, there will be close interaction between the hospital representatives of the Postgraduate Medical Council and Faculty, in coordination of a subinternship program that permeates final clinical rotations in the undergraduate medical course. The program will serve purposes important to both stakeholders: the Faculty will obtain important and relevant clinical learning for students, while (within legal and educational strictures) the hospital will obtain extra hands for clinical service. While this will help prepare students for some of the rigours of postgraduate existence, it will also aid the coordinators of subsequent postgraduate training in that there will be less requirement for resources to be directed at this process for interns.

Currently there are plans to evaluate the effectiveness of the subinternship program by surveying new UNSW graduates concerning their perceptions of the scheme. In 2003 the survey will be carried out in the first half of the year and there will be internal control in assessment of the results, since only some students of one clinical school will have had the opportunity to participate in the program.