THE UNIVERSITY OF QUEENSLAND
AUSTRALIA
CREATE CHANGE

# UQ Doctor of Medicine

## Program Description

*December 2022*

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# Overview

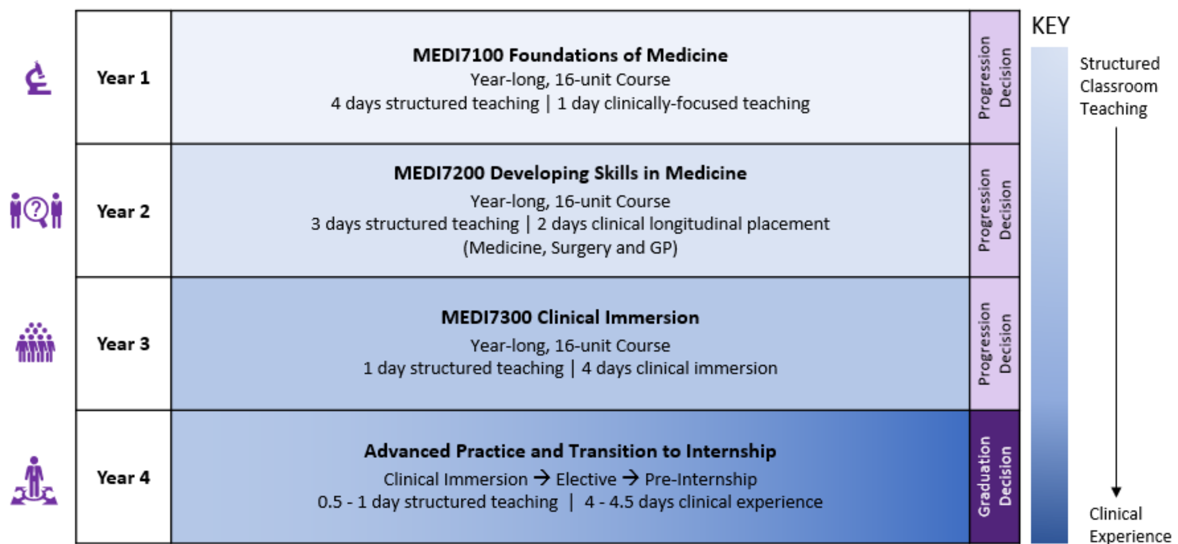
The new MD program for The University of Queensland represents a major step in a longer-term evolution of the MD program and builds on a range of improvement initiatives regarding admissions, introducing greater student choice into the program, and enhancing student academic guidance and support.

A structured and thorough approach has been taken to ensure that the Medical School's change efforts provide a new medical program that is indeed progressive, innovative and sets UQ apart from other medical programs both domestically and internationally.

Notably, circumstances relating to the COVID-19 pandemic have further highlighted opportunities to simplify and integrate the new MD program such that there is more horizontal and vertical integration to provide improved progression and a more learner centred approach. The pandemic has demonstrated the importance of supporting graduates to prepare better for the transition to internship (and beyond) and to adapt and respond flexibly to unanticipated external events.

Figure 1 provides a plain outline of the new four-year MD program structure. Each year will build on what has come before, with clearly stated learning outcomes and standards of achievement that build towards program level graduate attributes. Learning in a clinical setting will progressively ramp up from learning basic clinical skills in Year 1 through to full clinical workplace-based learning from Year 3 and a transition to practice focus in the second half of Year 4.

**Figure 1: MD Design program structure outline**




A simplified, integrated and appropriately staged program design will enable:

- A more coherent and less fragmented program structure
- A learner-centred integrated approach enabling students to appreciate how disciplines work together and encouraging them to develop as a professional
- Students to build their learning and capability across a sustained time period
- Better management of unavoidable absence and provision of more flexibility for students to catch up and progress on time if appropriate
- A more streamlined utilisation of teaching resources and engagement of discipline expertise
- A whole of program approach to assessment that identifies standards of achievement at each stage of learning and early identification of at-risk students

The key defining features of the new program are:

- A learner-centred approach to learning and teaching acknowledging the knowledge, experience, and strengths which students bring with them when they enter the program
- Simplified and cohesive program organisation with year-long courses for Years 1 to 3, an integrated approach to active learning and a whole of program approach to assessment that is explicitly linked to Staged Learning Outcomes (SLOs)
- Learning outcomes which prepare graduates to work with people across a wide range of communities, including rural and regional Australia
- Earlier meaningful clinical experience facilitated by membership of a 'Learning Community' from commencement
- More learner choice and focus on student enrichment opportunities
- Embedding of First Nations Health throughout the curriculum

- Embedding of research literacy, critical thinking and research application across the program, with a team scholarly project in Year 3 for all students
- Greater emphasis on multi-disciplinary teams and generalist/extensivist pathways achieved through longitudinal and/ or repeated exposure to various clinical contexts
- A stronger focus on career planning and the safe and effective transition to internship including a dedicated transition to practice term in the last half of Year 4
- Greater emphasis on advocacy and stewardship for the broader healthcare system and health improvement

## Themes

The six roles of the well-rounded doctor are the vertical themes of the new program (Figure 2). Each of the six have their own key components. Being role-orientated rather than topic-based, these vertical themes give a clear indication of the importance of the range of skills, attributes, behaviours as well as the knowledge needed to be a good doctor. They also signal the ultimate aims of the curriculum for students in stating the roles clearly. Detailed curriculum mapping of learning and assessment activities to themes will clearly demonstrate the relevance of each learning activity (and assessment item) to their future career as a doctor. The SLOs for each theme have been developed with attention to strong vertical integration across all four years. The role-based nature of the vertical themes also contribute to horizontal integration as there is overlap between them. This in turn facilitates planning of integrated learning experiences.

**Figure 2: New UQ MD Program Themes**

The rationale for having year-long courses across Years 1 to 3 of the program is to enable a more cohesive, integrated approach to learning and assessment, aligned to the six graduate roles, stage appropriate learning outcomes and to enable personal and professional growth.

In Year 4, the year is divided into two halves. The final progression decision will be made be made by the middle of Year 4, meaning that any final written or formal clinical assessments will be held prior to that time. This design feature is for two reasons:

1. To enable students to focus on the transition to practice during their final half of Year 4 without having an examination focus which tends to inhibit the necessary learning for optimal intern preparedness
2. To provide flexibility and time to enable any student falling only marginally short of meeting the necessary progression standard to have further support and opportunity to demonstrate their achievement of standards without delaying the entry to the workforce.

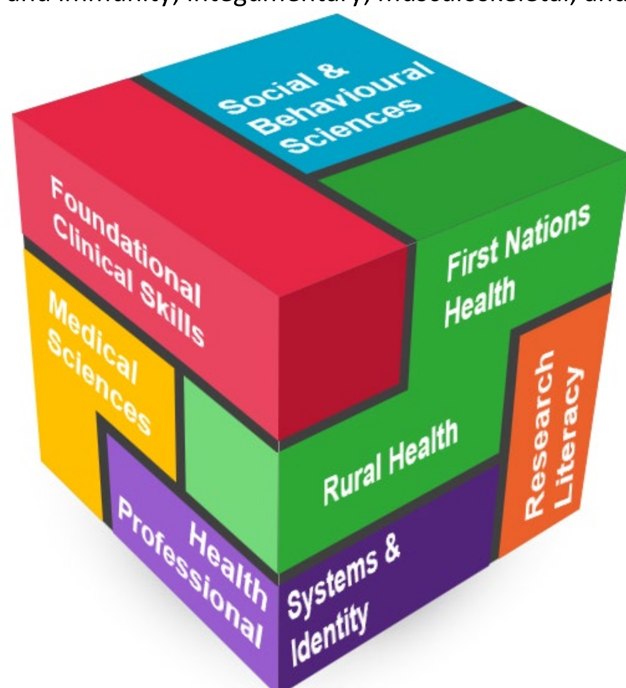
The fewer courses, the high degree of integration, and the theme-based approach will encourage continuous learning, growth of knowledge and skills development encompassing multiple disciplines. All disciplines will contribute to some degree to all five courses. As with the current program, each course will have a course coordinator who takes responsibility and works with a course team to provide an integrated curriculum experience to enable students to achieve the necessary SLOs for the course. The coordination and integration role of the course coordinator will be more significant than with the current program given that there are significantly fewer courses, and, by design, significantly greater integration required within and between courses.

Clinical Schools and Units, in collaboration with SPH and SBMS, will have responsibility for implementation of the MD program and it is anticipated that this will vary with the Learning Community context.

# Year by Year Description

## Year 1: Foundations of Medicine

**Foundations** of medical and scientific knowledge and concepts, cultural, clinical and professional skills, ethics and a whole-of-person approach. The scientific component will be organised around the broad areas: cardiorespiratory; blood, infection and immunity; integumentary; musculoskeletal; and nutrition metabolism and gastrointestinal. There will be a general focus on recognition of the normal, normal variability, with along with introduction of basic pathophysiological concepts. In line with the Year 1 SLOs, Indigenous health & history, research capability, cultural considerations, rural & remote health and professionalism will be embedded throughout. An extended **Transition to the MD period** of four weeks at the start of the year will be included to set the context of medical practice and clarify the principles and values underpinning the MD program. This will assist students to prepare for study of medicine and appreciate the importance and relevance of each of the six Themes.



**Learning and Teaching:** 4 days per week: structured teaching, for example team-based learning (TBL), lectorials, practical classes, interactive workshops, masterclasses and symposia informed by the SLOs make up the integrated syllabus. Involvement of clinicians, community and patients occurs throughout.

**Assessment, monitoring, progression:** Students will learn the key skill of self-evaluation through the whole of program assessment system. Rather than frequent high stakes mid semester and end of semester examinations, there will be more continuous lower stakes assessment. Feedback will be provided to help students (and staff) to monitor their progress and to enable early intervention if required. Cumulative achievement tests, clinical and professionalism assessments will be linked to learning outcomes and themes to enable triangulation of data across multiple methods.

At regular intervals students undertake a self-review in which they will reflect on their learning activity and progression will be reviewed towards achievement of the expected standards in the areas of 'knowing', 'doing', and 'being'. This process will enable tailored assistance to be offered during the Learning Development weeks. An end of year progression decision will be made from an holistic synthesis of assessment information collected throughout the year, along with the results from the end of course knowledge and skills assessments.

## Year 2: Developing Skills in Medicine

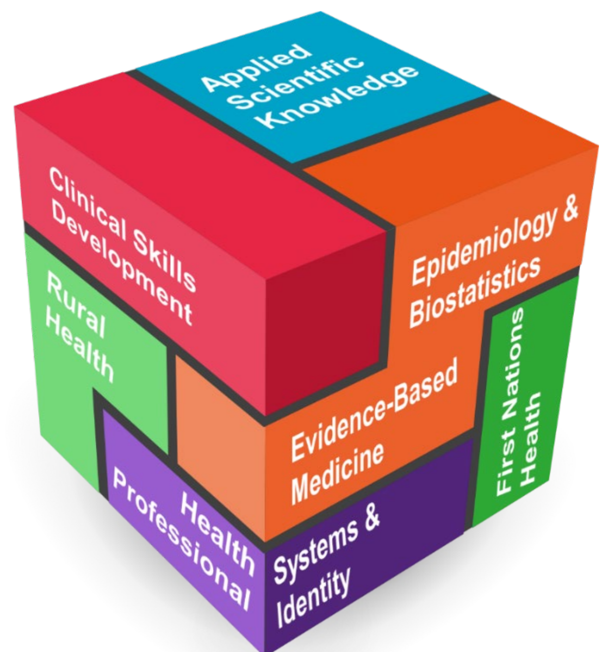
Developing knowledge, application of knowledge, skills, and professional behaviours, extending into clinical pathology and pathophysiology, recognising abnormalities in history and physical examination and clinical reasoning skills.

**Learning and Teaching:** Year 2 will continue a body systems approach as a basis for organise the scientific teaching in an integrated way. Focus will move to include pathophysiology underpinnings of signs and symptoms. Case-based learning (CBL) tutorials will be run weekly enabling development from Team-based learning (TBL) particularly in relation to application of knowledge to clinical scenarios and development of clinical reasoning, using and building upon the knowledge concepts and basic clinical skills gained in Year 1.

Clinical and professional learning will take place in classroom, skills simulation labs and in wards and clinics with the total time allocated to clinical and professional skills learning averaging two days per week across the year.

Students will commence longitudinal placements in a variety of hospital settings (Allied health, Medicine and Surgery) as well as in the Community and General Practice. Experience in settings where students will gain stage appropriate exposure to the variety of people doctors encounter in medical practice, for example babies, children, parents, the elderly, and the disadvantaged and disabled will be available.

The Year 2 course will include an opportunity to select study in an area of interest. This is based on the success of the current Year 2 selective courses. It is expected that this will take up a maximum time commitment of half a day per week for 16 weeks and will offer an opportunity for students to broaden or deepen their learning and to demonstrate progress towards and achievement of learning outcomes.




**UQ-Ochsner** students will have this selective time to participate in a series of sessions to support their preparation for the United States Medical Licencing Exam (USMLE). Domestic and Onshore students will have an opportunity to choose an area of study of their choice which will complement their medical studies. Examples will include extension work related to ones of the themes, research activity, rural and regional exposure, indigenous health, public health and health system advocacy, entrepreneurship and design thinking etc.

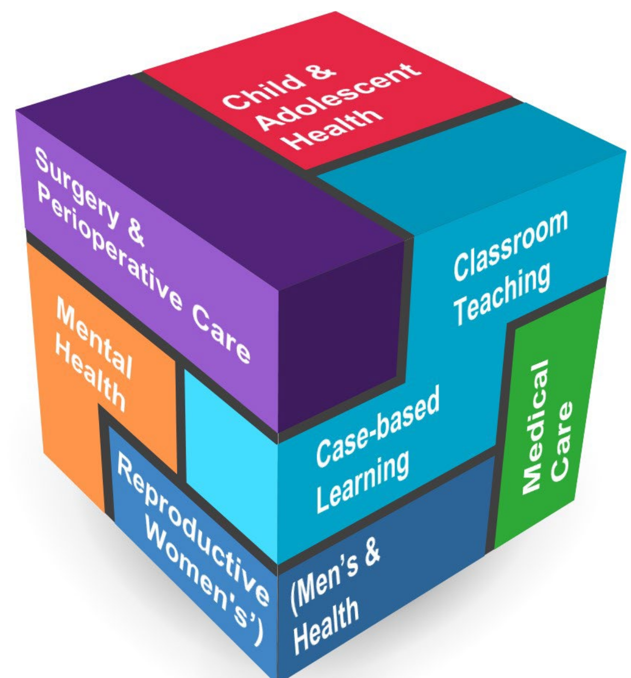
**Assessment, monitoring, progression:** A similar continuous monitoring process to Year 1 will be adopted with across-the-year activities and an end of year progression decision based on multiple assessment information points.

## Year 3: Clinical Immersion

**Clinical Immersion** as the student member of a medical team with a minimum placement length of 8 weeks. Using a life course framework, students will have 1 day per week of structured teaching, preferably provided at their Learning Community Base, complemented by 4 days a week in full-time clinical placement. The structured teaching program will run across the whole year providing the core year 3 curriculum. Additional clinical tutorials may be helpd during placements.

The focus of Year 3 will be on diagnosis and management of common presentations across the life course, team-based care, and chronic disease management and prevention. Clinical immersion and learning in Year 3 will build on the knowledge and skills developed during Years 1 and 2.

Many of the SLOs can be achieved in a variety of settings and placements may be organised in a variety of ways depending on the resources of the clinical Learning Community facilities. The Year 3 course is year-long and fully integrated. As far as possible, clinical placements should be organised so that students observe how different medical specialities work together and how healthcare teams collaborate to provide optimal care. This would include opportunities to experience regional, rural and remote healthcare.




The clinical placement organisation will vary between Clinical School (and Learning Community) contexts. A proposed approach suitable for the metropolitan setting is for 5 x 8-week placements across Year 3. Another possibility is to provide longitudinal integrated clerkships.

In the 5 x 8-week placement model, students will be based with one team for eight weeks to optimise their relationship with the primary supervising team. Students will actively participate as a member of the team in clinical activities during the placement. While students will be based with one team for continuity of supervision, they may visit different departments or participate in specific activities relevant to the core placement and which will be helpful to achieving the overall course learning outcomes. Throughout this year, students will gain a deeper understanding of role of the doctor in a variety of settings and in various specialties.

A **suggested grouping of disciplines** is:

A. **Medical care across the life course**: including geriatric medicine and end-of-life care. Relevant adolescent or paediatric material might also be included where practical (e.g., presentation, diagnosis and management of diabetes mellitus in children, adolescent and in adults)

B. **Surgical and peri-operative care**: including surgery, anaesthetics, pain management and wound care.

C. **Psychological impacts, mental health and care in special groups:** psychological management strategies for common mental health disorders, psychiatry, refugee health.

D. **Medical, surgical and psychiatric care** of **infants, children and adolescents.**

E. **Reproductive and sexual health**: for men, women and non-binary individuals including pregnancy, adoption, parenthood and relevant common health issues.

**Learning and teaching:** There will be a structured teaching program preferably provided at the home base of the Learning Family. The intention is that this will be a core program run across the whole year across all sites. This will be complemented by informal teaching which will occur on clinical placements and guided by the clearly stated learning outcomes for the year.

It is proposed that a clinical case-based format for Year 3 will build on Year 2 – for example by having students prepare cases based on the stories of real patient they have seen themselves and unfolded in a way which explores and promotes effective clinical reasoning.

All students in Year 3 will complete a **team scholarly project**. Students will work in small groups on a specific scholarly topic of their choice that will relate to one or more theme(s) of the MD program (examples include a literature review; a clinical audit or service improvement initiative; a health promotion project).

There will be a total of **40 weeks of study** each with 4 days in clinical immersion and 1 day (equivalent) of classroom / structured teaching (including time spent on the team scholarly project).

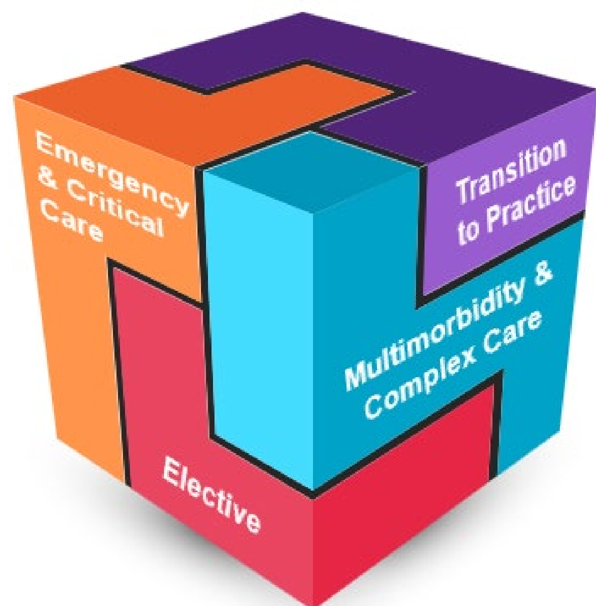
**Monitoring and Assessment:** There will be a strong focus on workplace-based assessment, while still ensuring the application of knowledge from the previous years to the clinical setting.

The organisation of clinical placements in Learning Communities will strengthen relationships between students and their supervising teams through introducing greater continuity and connection. The team will also be better able to assess of individual student progress offer constructive feedback for improvement in performance.

## Year 4: Advanced Practice and Transition to Internship

The final year of the program is focused on readiness for internship. There will be **40 weeks of study/assessment in Year 4**, including an 8-week elective in the second half of the year for those who are clearly proficient.

**Part A (Advanced Practice):** The focus of this half of the year is on complex and emergency care both in hospital and in the community. Placements will enable students to build on the learning from the previous three years of the program and apply it to assessment and management of emergencies and complex cases, including undifferentiated presentations, chronic disease management, and multimorbidity. Learning will be in both hospital and community settings including transition and transport between the two. Suitable base placements will be in Emergency Departments, acute medical wards and General Practice with involvement from a variety of disciplines ensuring that students have thorough exposure to undifferentiated presentations, complex cases, emergencies and intensive care across the spectrum of medical care (including in regional and rural settings). During this half of the year, students will benefit from exposure to core teaching about medical, surgical, obstetric, psychiatric, ophthalmic, paediatric and neonatal emergencies as well as radiology, clinical pathology, patient transport and trauma.




**Learning and teaching:** As in Year 3, clinical immersion will be complemented by a core teaching program provided on one day a week at the Learning Communities, as well as the opportunistic teaching which occurs on the wards or in the clinic. The focus of the teaching program in Year 4 will be on the safe transition to internship and will include topics like: safe prescribing, discharge summaries and referrals.

A final major assessment will be undertaken at the end of the first half of Year 4. The rationale is to enable keen engagement during the elective and intern preparation period, rather than a focus on formal examinations.

**Part B (Transition to Practice and Pre-Internship):** The last element of the program is a **capstone** focussed on enabling students to be capable and confident to start internship optimally prepared for the next stage of their medical education journey in prevocational training.

There will be an **8-week elective opportunity** with clear requirements including a capstone statement. Most students will choose to spend their elective broadening their experience in a clinical setting including specialities but, for those who prefer it, there will also be the opportunity to undertake research or to deepen learning in one of the six Theme-related areas. This could include a placement in a regional, rural or remote healthcare setting. Students who have identified areas where they are not meeting the required outcomes will have a directed elective.

The final 10-week pre-internship placement will ideally be undertaken in the unit where students will be starting their internship. It will be undertaken in a placement where there is an intern (e.g., medicine, surgery or emergency) so that students can have an authentic experience as a pre-intern.

**Learning and Teaching: Building on what is covered in the first half of Year 4,** a structured teaching program focussed on performance of key skills required from day one as a medical intern (for example: safe prescribing, discharge summaries, referral requests, appropriate ordering of investigations, advance care planning etc) will be run during this period, and assessment will be along the lines of that being introduced into prevocational training - such workplace-based assessments that may include Entrustable Professional Activities (EPAs) as well as satisfactory completion of placement/s.

Finally, the capstone experience in the second half of Year 4 will be designed around ensuring excellent preparation for internship. Currently the Queensland Medical Schools Consultative Committee is undertaking a Pre-internship working party, aiming for consensus in approach across the state. The goal of this final placement is to enable the senior medical student to transition to the role of junior medical officer in a seamless fashion. Associate Professor Warrick Inder, from the MD Design team, sits on this committee. The concept is for full workplace-based immersion, with assessment Entrustable Professional Activities, which are to become the mode of assessment for prevocational training.

# Curriculum description

The outcomes-based nature of MD Design will be introduced to students in the orientation period of the MD program at the start of Year 1 and the learning outcomes will be available on Blackboard. As per UQ policy each course will be outlined in the ECP which is easily available to all staff and students.

The ECP will provide detailed information about the course staff, course outcomes, learning activities and resources and assessment.

The theme SLOs for each year of the program clearly demonstrate the vertical integration inherent in the curriculum design. The process of detailed course development includes regular and frequent discussion between the CDIG Leads to promote and maintain vertical integration. The intention of the fully integrated courses is to increase horizontal integration between traditionally separate discipline-based topics.

The choice of learning activities is another element of encouraging course contributors to collaborate in integrating their teaching content. An example of this is a multi-disciplinary clinical plenary where a radiologist, a pathologist and an orthopaedic surgeon present a patient who has had a knee replacement for severe osteoarthritis. This, in one session integrates the patient's history, the pathological processes involved, the x-rays findings and the surgical perspective. Such a session might be run in Year 1 when students are learning about the musculoskeletal system. By doing this, teachers are also role-modelling collaboration and respect for each other's expertise.

## Aboriginal and Torres Strait Islander health

The development of learning experiences relating to First Nations health and Indigenous Australians' ways of knowing, being and doing is being led by Aboriginal and Torres Strait Islander academics, who have extensive experience in curriculum design, development and provision in this area. The experiences will support transformation across the program, including workshops within the first four weeks of the program (Transition to the MD) introducing concepts of culture, specifically Indigenous cultures; exploring Australian history and the impacts of colonialization in general context and on health. Further foundational experiences in the first year of the program will include developing students' skill and experience of reflective practice; undertaking family/home ethnographies to enrich understanding of their own culture so as to better appreciate differing cultures and excursions to places of cultural significance led by Traditional Owners of these areas; online modules; workshops; masterclasses/symposia, including and led by Indigenous Australians and opportunities for student service experiences. There is a strong focus on guided reflection in this and all years of the program for the learning around Indigenous Health, with recognition that this skill transposes to many areas of the curriculum.

In the second year of the program, the Medical School plans to provide at least two, full-days of cultural immersion activities led by Traditional Owners to give students space and place for reflecting on learning, and to facilitate further learning/understanding around racism, stigma, discrimination and bias. Development of identity and how this interacts with other cultural perspectives, including Indigenous culture, will be attained through further experiences such as by participation in an ethnography of medical culture, workshops and tutorials.

Years 3 and 4 of the program will promote intentional and incidental immersive learning experiences pertaining to experiences of First Nations people within health systems, the clinical issues facing First Nations people as individuals and communities and the promotion of the place of First Nations peoples within the practice of medicine as medical (and other health) practitioners.

The use of the whole of program assessment will specifically assess all learning outcomes associated with cultural proficiency and humility and Aboriginal and Torres Strait Islander health and other First Nations people's health. This includes the assessment of reflective practice and professionalism skills promoting understanding and behaviours that address issues that particularly affect Indigenous Australians and others, such as racism, stigma and discrimination.

## Opportunities for choice to promote breadth and diversity

Building on the success of the personalised learning course in the current curriculum and aiming to encourage students to broaden or deepen their learning and experience, there are three points in MD Design when student have choice.

**Year 2**: time will be factored into the course for students to explore an area of interest related to health. This may be research, public health or study or experience related to any of the six themes. UQ-Ochsner students will be encouraged to use this time for preparation for the USMLE. The exact parameters and assessment around this 'elective' are still to be finalised but it is expected that students will devote the equivalent of approximately 4-5 hours per week over at least a ten-week period.

**Year 3**: Students in Year 3 will be required to work together in small groups on a shared project on a health-related topic – the team-based scholarly project. All teams must complete a scholarly piece of work, which could include a research project, a quality improvement project or a systematic review. The Year 3 Course design and implementation group (CDIG) will develop more detailed plans when established in quarter 2 of 2022.

**Year 4**: The elective period in the final course of the program will offer students the opportunity to undertake clinical research or educational study or experience in an area of interest. At this stage in the program, students will have completed their final progression hurdle, and the elective offers a final opportunity to broaden or deepen their knowledge, skills or experience. Undertaking the elective away from their home base will be encouraged thus broadening experience further. The Year 4 elective will give students the opportunity to demonstrate the type of skills and attributes they will need during internship and will form a key element of their final capstone period.

Throughout the program the current co-curricular or extra-curricular opportunities for research including the clinical researcher track will continue.

# Comments or Feedback

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