

Profile information current as at 11/05/2024 10:31 am

All details in this unit profile for PODI13011 have been officially approved by CQUniversity and represent a learning partnership between the University and you (our student). The information will not be changed unless absolutely necessary and any change will be clearly indicated by an approved correction included in the profile.

# **General Information**

### Overview

This unit encompasses a clinical component and a research component. In the clinical component, you will continue to assess, diagnose, manage and treat a range of patients with different lower limb pathologies; including patients with dermatological, vascular, neurological and nail pathologies. In addition, opportunities will be provided to you to advance your podiatric skills and treat patients with sports injuries and other biomechanical concerns. During clinic, you are required to clearly present patient cases and explain the related underlying pathophysiology to your clinical supervisor; including demonstrating your clinical reasoning skills with respect to assessment, diagnosis and management. This unit is the first of the formal requirements of the research project component of the Honours degree. In the research component you will complete a research proposal and identify a research project through your analysis of the literature that will be carried out in the fourth year of the course.

### **Details**

Career Level: Undergraduate

Unit Level: Level 3
Credit Points: 6

Student Contribution Band: 8

Fraction of Full-Time Student Load: 0.125

# Pre-requisites or Co-requisites

Pre-requisites: PODI13007 Podiatry Clinical Practice 2, PODI13008 Clinical Biomechanics of the Lower Limb, PODI13009 Neurovascular Medicine in Podiatry Practice, PODI13010 Sports in Podiatry Practice. Co-requisite: PODI13015 Advanced Pharmacology in Podiatry Practice.

Important note: Students enrolled in a subsequent unit who failed their pre-requisite unit, should drop the subsequent unit before the census date or within 10 working days of Fail grade notification. Students who do not drop the unit in this timeframe cannot later drop the unit without academic and financial liability. See details in the <a href="Assessment Policy and Procedure (Higher Education Coursework)">Assessment Policy and Procedure (Higher Education Coursework)</a>.

# Offerings For Term 2 - 2020

- Rockhampton
- Sydney

# Attendance Requirements

All on-campus students are expected to attend scheduled classes – in some units, these classes are identified as a mandatory (pass/fail) component and attendance is compulsory. International students, on a student visa, must maintain a full time study load and meet both attendance and academic progress requirements in each study period (satisfactory attendance for International students is defined as maintaining at least an 80% attendance record).

#### Website

This unit has a website, within the Moodle system, which is available two weeks before the start of term. It is important that you visit your Moodle site throughout the term. Please visit Moodle for more information.

# Class and Assessment Overview

## Recommended Student Time Commitment

Each 6-credit Undergraduate unit at CQUniversity requires an overall time commitment of an average of 12.5 hours of study per week, making a total of 150 hours for the unit.

# Class Timetable

#### **Regional Campuses**

Bundaberg, Cairns, Emerald, Gladstone, Mackay, Rockhampton, Townsville

#### **Metropolitan Campuses**

Adelaide, Brisbane, Melbourne, Perth, Sydney

#### **Assessment Overview**

1. Project (research)

Weighting: 50%

2. On-campus Activity

Weighting: Pass/Fail

3. Professional Practice Placement

Weighting: Pass/Fail

4. Objective Structured Clinical Examinations (OSCEs)

Weighting: 50%

# Assessment Grading

This is a graded unit: your overall grade will be calculated from the marks or grades for each assessment task, based on the relative weightings shown in the table above. You must obtain an overall mark for the unit of at least 50%, or an overall grade of 'pass' in order to pass the unit. If any 'pass/fail' tasks are shown in the table above they must also be completed successfully ('pass' grade). You must also meet any minimum mark requirements specified for a particular assessment task, as detailed in the 'assessment task' section (note that in some instances, the minimum mark for a task may be greater than 50%). Consult the <u>University's Grades and Results Policy</u> for more details of interim results and final grades.

# **CQUniversity Policies**

## All University policies are available on the CQUniversity Policy site.

You may wish to view these policies:

- Grades and Results Policy
- Assessment Policy and Procedure (Higher Education Coursework)
- Review of Grade Procedure
- Student Academic Integrity Policy and Procedure
- Monitoring Academic Progress (MAP) Policy and Procedure Domestic Students
- Monitoring Academic Progress (MAP) Policy and Procedure International Students
- Student Refund and Credit Balance Policy and Procedure
- Student Feedback Compliments and Complaints Policy and Procedure
- Information and Communications Technology Acceptable Use Policy and Procedure

This list is not an exhaustive list of all University policies. The full list of University policies are available on the CQUniversity Policy site.

# Previous Student Feedback

# Feedback, Recommendations and Responses

Every unit is reviewed for enhancement each year. At the most recent review, the following staff and student feedback items were identified and recommendations were made.

# Feedback from 'Have Your Say' student feedback

#### **Feedback**

Students identified that the format of the lecture slide handouts needed to be in grey scale and to have more display options.

#### Recommendation

It is recommended that the unit coordinator provides future lecture slides in grey scale and in both one slide per page and three slides per page handout options to the students.

# Feedback from 'Have Your Say' student feedback

#### **Feedback**

Students reported that the format of the lectures and the content covered was very helpful to their ability to successfully complete the first assignment related to their honours.

#### Recommendation

It is recommended that the unit coordinator continues to provide lectures which step the students through conducting their first research project.

## Feedback from 'Have Your Say' student feedback and staff reflection

#### **Feedback**

Students experienced some difficulty in navigating the newly formatted Moodle page.

#### Recommendation

It is recommended that the lecturer talk students through the new Moodle page format to allow students to better navigate the Moodle site. .

# **Unit Learning Outcomes**

### On successful completion of this unit, you will be able to:

- 1. Critically appraise a range of literature focused on a specified topic
- 2. Conduct an appropriate analysis and draw reasoned conclusions to make future recommendations for research and practice
- 3. Identify and analyse key clinical problems by planning and completing assessments, including taking patient history, conducting objective tests and investigations with moderate supervision
- 4. Select and correctly apply therapeutic and/or preventative interventions based on patient assessment findings
- 5. Communicate effectively and efficiently with patients and within multi-disciplinary environments
- 6. Demonstrate competency at an entry level standard of practice in clinical reasoning, execution of techniques, and delivery of programs to manage specific clinical problems.

Per NPC1316

# Alignment of Learning Outcomes, Assessment and Graduate Attributes



# Alignment of Assessment Tasks to Learning Outcomes

Assessment Tasks		Learning Outcomes										
		1		2	3		4	5		6		
1 - Professional Practice Placement - 0%					•		•	•		•		
2 - Objective Structured Clinical Examinations (OSCEs) - 50%					•		•	•				
3 - Project (research) - 50%		•		•								
4 - On-campus Activity - 0%		•								•		
Alignment of Graduate Attributes to Learning	Out	tcor	nes									
Graduate Attributes					Learning Outcomes							
					1	2	3	4	5	6		
1 - Communication					•	•	•	•	•	•		
2 - Problem Solving					•	•	•	•	•	•		
3 - Critical Thinking					•	•	•	•	•	•		
4 - Information Literacy					•	•	•	•	•	•		
5 - Team Work					•		•	•	•	•		
6 - Information Technology Competence					•	•	•	•		•		
7 - Cross Cultural Competence							•	•	•	•		
8 - Ethical practice							•	•	•	•		
9 - Social Innovation					•			•				
10 - Aboriginal and Torres Strait Islander Cultures												
Ni wayaa ah af Aasaa ay ay Taalaa ka Guadwaka (	\ <b></b>											
Alignment of Assessment Tasks to Graduate A		DUL duat		ribut	es							
	1	2	3	4	5	6	7	8	9	10		
1 - Professional Practice Placement - 0%	•	•	•	•	•	•	•	•				
2 - Objective Structured Clinical Examinations (OSCEs) - 50%	•	•	•	•	•		•	•				
3 - Project (research) - 50%	•	•	•	•	•	•	•	•	•			
4 - On-campus Activity - 0%	•	•	•			•						

# Textbooks and Resources

# **Textbooks**

PODI13011

#### **Supplementary**

#### **Discovering Statistics using IBM SPSS statistics**

Edition: fifth (2018) Authors: Andy Fields Sage Publications London . UK

ISBN: 978-1-5264-1951-4

Binding: Other PODI13011

## **Supplementary**

#### Doing a Systematic Review A students guide

Edition: second (2017)

Authors: Angela Boland, Gemma Cherry, Rumona Dickson

Sage Publications Binding: eBook

#### **Additional Textbook Information**

If you prefer to study with a paper copy, they are available at the CQUni Bookshop here: <a href="http://bookshop.cqu.edu.au">http://bookshop.cqu.edu.au</a> (search on the Unit code). eBooks are available at the publisher's website.

## IT Resources

#### You will need access to the following IT resources:

- CQUniversity Student Email
- Internet
- Unit Website (Moodle)

# Referencing Style

All submissions for this unit must use the referencing style: <u>American Psychological Association 7th Edition (APA 7th edition)</u>

For further information, see the Assessment Tasks.

# **Teaching Contacts**

Malia Ho Unit Coordinator

m.ho@cqu.edu.au

# Schedule

#### Week 1 - 13 Jul 2020

Module/Topic Chapter Events and Submissions/Topic

Overview of unit

Research-Practice Relationship Scoping research questions

## Week 2 - 20 Jul 2020

Module/Topic Chapter Events and Submissions/Topic

Research paradigms and design Fine tuning your research project (Part 1)		
Week 3 - 27 Jul 2020		
Module/Topic	Chapter	<b>Events and Submissions/Topic</b>
Systematic reviews Fine tuning your research project (Part 2)		
Week 4 - 03 Aug 2020		
Module/Topic	Chapter	<b>Events and Submissions/Topic</b>
Ethics application Research protocols and proposals		
Week 5 - 10 Aug 2020		
Module/Topic	Chapter	<b>Events and Submissions/Topic</b>
		Ethics application submission
Foundations of statistics		<b>Project</b> Due: Week 5 Friday (14 Aug 2020) 11:59 pm AEST
Vacation Week - 17 Aug 2020		
Module/Topic	Chapter	Events and Submissions/Topic
Week 6 - 24 Aug 2020		
Module/Topic	Chapter	<b>Events and Submissions/Topic</b>
Clinic Block Placement		
Week 7 - 31 Aug 2020		
Module/Topic	Chapter	<b>Events and Submissions/Topic</b>
Clinic Block Placement		
Week 8 - 07 Sep 2020		
Module/Topic	Chapter	<b>Events and Submissions/Topic</b>
Clinic Block Placement		
Week 9 - 14 Sep 2020		
Module/Topic	Chapter	Events and Submissions/Topic
Clinic Block Placement		Project presentations (Podiatry and Speech Pathology) (Part 1) Mid Term Clinical Assessments
Week 10 - 21 Sep 2020		
Module/Topic	Chapter	<b>Events and Submissions/Topic</b>
Clinic Block Placement		Project presentations (Podiatry and Speech Pathology) (Part 2)
Week 11 - 28 Sep 2020		
Module/Topic	Chapter	Events and Submissions/Topic
		End of Term Clinical Assessment OSCE (50%)
Clinic Block Placement		<b>OSCE</b> Due: Week 11 Thursday (1 Oct 2020) 9:00 am AEST
Week 12 - 05 Oct 2020		
Module/Topic	Chapter	Events and Submissions/Topic

Finalisation of ethics application for research project

On-campus activity - Pass/ Fail Due: Week 12 Friday (9 Oct 2020)

11:59 pm AEST

Professional practice placement -Pass/ Fail Due: Week 12 Friday (9 Oct

2020) 11:59 pm AEST

Review/Exam Week - 12 Oct 2020

Module/Topic Chapter Events and Submissions/Topic

Exam Week - 19 Oct 2020

Module/Topic Chapter Events and Submissions/Topic

# **Term Specific Information**

The Vice-Chancellor has approved exemptions for practical and clinical sessions for specific courses at CQUniversity. Students in the Bachelor of Podiatry Practice (Honours) course will be required to resume their studies on-campus for practical classes and clinical placements Terms 2 and 3 2020.

Provisions for social distancing will be implemented in all practical and clinical learning spaces for podiatry students. All staff, students and patients will be screened for COVID-19 symptoms and risk factors. Personal Protective Equipment (PPE) will be worn as required.

The re-commencement of practical and clinical sessions comes with the proviso that it will be subject to State and Federal health regulations if the situation with COVID-19 should deteriorate.

All lectures and tutorials will be conducted online as pre-recorded lectures, and/ or zoom sessions. Practical sessions and Internal clinical placements will occur as a block placement from Weeks 6 to 11.

Attendance: As per the University's recommendation that all 'on-campus' students are expected to attend scheduled online classes. Students should also be aware that there is clear evidence to show that attendance rates are directly related to academic progress. It is therefore in your best interest and strongly recommended in the Bachelor of Podiatry Practice (Honours) course, that you attend all scheduled learning activities to support your learning.

Uniform: Students are required to wear the mandatory clinical uniform during all clinical placements.

Additional contacts:

Internal Clinical Placement Supervisor (Sydney):

Ms. Merridy Lithgow: tel: (02) 9324 5767 email: m.lithgow@cqu.edu.au;

Internal Clinical Placement Supervisors (Rockhampton):

Ms. Angela Wilczek tel: (07) 4930 9651 email: a.wilczek@cqu.edu.au;

CQUniversity Health Clinic (Sydney) (Administration / Reception):

Tel: (02) 9324 5055; email: sydneyhealthclinic@cqu.edu.au

CQUniversity Health Clinic (Rockhampton) (Administration / Reception):

Tel: (07) 4930 9030; email: health-clinic@cqu.edu.au

Unit Coordinator:

Dr. Malia Ho: tel: (07) 4930 9469 email: m.ho@cqu.edu.au

Clinical Engagement Coordinator:

Ms. Angela Wilczek tel: (07) 4930 9651 email: a.wilczek@cqu.edu.au;

# **Assessment Tasks**

# 1 Project

## **Assessment Type**

Project (research)

#### **Task Description**

This project will form part of your thesis. In this unit, you will formulate a research question and protocol. This assessment task consist of two components.

- 1) Ethics application: You will complete and submit an ethics application (30%) by **Week 5 (Friday, 14th August 2020, 11:59 pm).**
- 2) Based on your research project and ethics application feedback, you will present a research proposal (20%) which will be in a form of a PowerPoint presentation in **Week 9 (Tuesday, 15th September 2020) or Week 10 (Tuesday, 22nd September 2020).** This presentation will be 12 minutes long, with 3 minutes for Q & A.

#### **Assessment Due Date**

Week 5 Friday (14 Aug 2020) 11:59 pm AEST

#### **Return Date to Students**

Week 12 Tuesday (6 Oct 2020)

#### Weighting

50%

#### Minimum mark or grade

50%

#### **Assessment Criteria**

Students will be marked based on a specific marking rubric which will be made available during term. Assessment criteria will include the quality of the research question and design, the methodology and the statistical tools used,

#### **Referencing Style**

• American Psychological Association 7th Edition (APA 7th edition)

#### **Submission**

Online

#### **Learning Outcomes Assessed**

- Critically appraise a range of literature focused on a specified topic
- Conduct an appropriate analysis and draw reasoned conclusions to make future recommendations for research and practice

#### **Graduate Attributes**

- Communication
- Problem Solving
- Critical Thinking
- Information Literacy
- Team Work
- Information Technology Competence
- Cross Cultural Competence
- Ethical practice
- Social Innovation

# 2 On-campus activity - Pass/ Fail

### **Assessment Type**

**On-campus Activity** 

#### **Task Description**

You will be required to complete Part A (Clinical Manual Skills) of your Podiatry Practical Skills Logbook. The practical activities will occur during your internal clinical placement hours.

#### **Assessment Due Date**

Week 12 Friday (9 Oct 2020) 11:59 pm AEST

#### **Return Date to Students**

#### Weighting

Pass/Fail

#### Minimum mark or grade

Pass

#### **Assessment Criteria**

The Podiatry Practical Skills Logbook (Part A) tracks the progress of your clinical skills over the term.

The criteria of Part A will be made available at the beginning of the term and will be submitted together with Parts B and C on **Friday 2nd October 2020, 5 pm. via Moodle.** 

#### **Referencing Style**

• American Psychological Association 7th Edition (APA 7th edition)

#### **Submission**

No submission method provided.

#### **Submission Instructions**

The on-campus activity (Part A) will be submitted online together with Parts B and C, within the Podiatry Practical Skills Logbook.

## **Learning Outcomes Assessed**

- Critically appraise a range of literature focused on a specified topic
- Demonstrate competency at an entry level standard of practice in clinical reasoning, execution of techniques, and delivery of programs to manage specific clinical problems.

#### **Graduate Attributes**

- Communication
- Problem Solving
- Critical Thinking
- Information Technology Competence
- Cross Cultural Competence
- Ethical practice

# 3 Professional practice placement - Pass/ Fail

#### **Assessment Type**

Professional Practice Placement

#### **Task Description**

Internal clinical placement

You will complete an internal clinical placement at the relevant CQUniversity health clinic, where you will provide a range of podiatric care to patients. The internal clinical placement will occur from Week 6 (27th August 2020) to Week 11 (1st October 2020).

Internal Clinical Placement (144 hours) will be every Tuesday, Wednesday and Thursday from 8:00 am to 5:00 pm between the 27th August 2020 to the 1st October 2020 (inclusive).

You will be required to complete Part B (Mid term and End of Term clinical assessment) and C (Reflective Practice) of the Podiatry Practical Skills Logbook This is to be completed and submitted by **Friday 2nd October 2020, 5 pm. via Moodle.** 

External clinical placement

You will also complete an external clinical placement.

The target dates for External Clinical Placement are the 26th October to the 13th November 2019 inclusive (120 hours / 3 weeks). Please note that these dates are subject to change. In addition, external placement dates and location are dependent on the site's availability therefore placement dates may vary slightly for each student. Details of individual placement locations and dates will be provided to you during the term. External clinical placement may be located either in a metropolitan area or in a rural or remote area. Please note that you may need to travel at your own expense for your external placement.

You will be required to complete and submit your External Clinical Documentation by the **20th November 2020**, **5 pm, via Moodle.** 

#### **Assessment Due Date**

Week 12 Friday (9 Oct 2020) 11:59 pm AEST

#### **Return Date to Students**

#### Weighting

Pass/Fail

#### Minimum mark or grade

**Pass** 

#### **Assessment Criteria**

**Internal Clinical Placement:** You must show evidence that you have met all the pre-clinical placement requirements (available on the Moodle site) prior to commencing placement; failure to provide the required documentation will mean that you will be unable to attend any placement until the missing documentation has been supplied. You are required to wear the approved CQUniversity podiatry clinical uniform and to project a professional image at all times. Clinical placement is compulsory requiring 100% attendance rate. If you are absent, you will have to follow the "Absentee policy" set out in the internal Clinical Placement handbook.

The Mid and End of Term Assessment Criteria can be found in your Internal Clinical Placement Handbook that will be available on the Moodle site.

You will be required to be assessed as "Competent" for all criteria in the End of Term Assessment. Failure to achieve this will result in a "Fail" grade for this assessment task and a "Fail" grade for this unit.

#### **External Clinical Placement:**

Before placement: The <u>Learning Contract</u> must be submitted 2 weeks (10 working days) prior to the allocated placement commencement. The student must submit this to the Unit Coordinator for review and sign-off at least two weeks prior to placement commencement.

After placement: The following documentation must be completed and submitted within 1 week after the placement has been completed: Learning Contract, Log Book Reflections, Time Sheet, Student Evaluation of the Clinical Placement and Clinical Supervisor Report. Students will be required to fill in their Learning Contract, Log Book Reflections, Time Sheet, and Student Evaluation of the Clinical Placement. External supervisors and other relevant academic staff will assess whether students have satisfactorily met the Podiatry Competency Standards for Australia and New Zealand (2015) during their external placement. This will be recorded in the Clinical Supervisor Report. External placement has a pass/fail requirement. Timely submission of ALL above documents are mandatory. Failure to submit any documents and failure to meet the competency standards will result a "Fail" grade for this assessment task and a "Fail" grade for this unit.

#### **Referencing Style**

American Psychological Association 7th Edition (APA 7th edition)

#### **Submission**

Online

#### **Submission Instructions**

Please submit the Podiatry Practical Skills Logbook containing completed Parts A,B and C.

## **Learning Outcomes Assessed**

- Identify and analyse key clinical problems by planning and completing assessments, including taking patient history, conducting objective tests and investigations with moderate supervision
- Select and correctly apply therapeutic and/or preventative interventions based on patient assessment findings
- · Communicate effectively and efficiently with patients and within multi-disciplinary environments
- Demonstrate competency at an entry level standard of practice in clinical reasoning, execution of techniques, and delivery of programs to manage specific clinical problems.

#### **Graduate Attributes**

- Communication
- Problem Solving
- Critical Thinking
- Information Literacy
- Team Work
- Information Technology Competence
- Cross Cultural Competence
- Ethical practice

#### 4 OSCE

#### **Assessment Type**

Objective Structured Clinical Examinations (OSCEs)

#### **Task Description**

The OSCE will include written, verbal and practical components. The OSCE will assess your clinical knowledge, practical and assessment skills and clinical reasoning. Based on a clinical scenario, you will be required to discuss and perform aspects of relevant history taking, assessment, diagnosis and treatment of the presenting condition. All assessments may be video/ audio recorded for moderation purposes. You are expected to be punctual for your allocated start time of the OSCE, with the appropriate clinical uniform and footwear.

#### **Assessment Due Date**

Week 11 Thursday (1 Oct 2020) 9:00 am AEST

The OSCE is scheduled for Thursday, 1st October 2020, 9:00 am - 5:00 pm. Please note that this may be subject to change.

#### **Return Date to Students**

Week 12 Monday (5 Oct 2020)

#### Weighting

50%

#### Minimum mark or grade

50%

#### **Assessment Criteria**

Students will be assessed on their clinical competency in line with the Podiatry Competency Standards developed by the Australian & New Zealand Podiatry Accreditation Council (2015).

Students will be marked according to a specific marking rubric, which will be made available during the term. If you do not achieve a minimum grade of 50%, you may be eligible for a supplementary assessment within two weeks of the initial scheduled OSCE day; provided you meet the requirements as stipulated in the CQUniversity Grades and Results Procedure and this will be determined by the Unit Coordinator and Learning and Teaching Team.

### **Referencing Style**

• American Psychological Association 7th Edition (APA 7th edition)

#### **Submission**

Offline

### **Learning Outcomes Assessed**

- Identify and analyse key clinical problems by planning and completing assessments, including taking patient history, conducting objective tests and investigations with moderate supervision
- Select and correctly apply therapeutic and/or preventative interventions based on patient assessment findings
- · Communicate effectively and efficiently with patients and within multi-disciplinary environments

## **Graduate Attributes**

- Communication
- Problem Solving
- Critical Thinking
- Information Literacy
- Team Work
- Cross Cultural Competence
- Ethical practice

# **Academic Integrity Statement**

As a CQUniversity student you are expected to act honestly in all aspects of your academic work.

Any assessable work undertaken or submitted for review or assessment must be your own work. Assessable work is any type of work you do to meet the assessment requirements in the unit, including draft work submitted for review and feedback and final work to be assessed.

When you use the ideas, words or data of others in your assessment, you must thoroughly and clearly acknowledge the source of this information by using the correct referencing style for your unit. Using others' work without proper acknowledgement may be considered a form of intellectual dishonesty.

Participating honestly, respectfully, responsibly, and fairly in your university study ensures the CQUniversity qualification you earn will be valued as a true indication of your individual academic achievement and will continue to receive the respect and recognition it deserves.

As a student, you are responsible for reading and following CQUniversity's policies, including the **Student Academic Integrity Policy and Procedure**. This policy sets out CQUniversity's expectations of you to act with integrity, examples of academic integrity breaches to avoid, the processes used to address alleged breaches of academic integrity, and potential penalties.

#### What is a breach of academic integrity?

A breach of academic integrity includes but is not limited to plagiarism, self-plagiarism, collusion, cheating, contract cheating, and academic misconduct. The Student Academic Integrity Policy and Procedure defines what these terms mean and gives examples.

#### Why is academic integrity important?

A breach of academic integrity may result in one or more penalties, including suspension or even expulsion from the University. It can also have negative implications for student visas and future enrolment at CQUniversity or elsewhere. Students who engage in contract cheating also risk being blackmailed by contract cheating services.

#### Where can I get assistance?

For academic advice and guidance, the <u>Academic Learning Centre (ALC)</u> can support you in becoming confident in completing assessments with integrity and of high standard.

#### What can you do to act with integrity?



#### **Be Honest**

If your assessment task is done by someone else, it would be dishonest of you to claim it as your own



#### Seek Help

If you are not sure about how to cite or reference in essays, reports etc, then seek help from your lecturer, the library or the Academic Learning Centre (ALC)



#### **Produce Original Work**

Originality comes from your ability to read widely, think critically, and apply your gained knowledge to address a question or problem