

SUBJECT OUTLINE



Subject Name:

Herbal Botany

Subject Code:

WHMF123

SECTION 1 – GENERAL INFORMATION

Award/s:

Bachelor of Complementary Medicine

Total course credit points:

48

Level:

3rd Year

Duration:

1 Semester

Subject Coordinator: Julie Wilkinson Flores (Melbourne campus)

Subject is: Elective

Subject Credit Points: 2

Student Workload:

No. timetabled hours per week:

3

No. personal study hours per week:

2

Total hours per week:

5

Delivery Mode:

E-Learning

Details:

Narrated Powerpoint presentations

Tutorial - Asynchronous tutor-moderated discussion forum and activities

Student handouts and web resources

Full Time

Part Time

Pre-requisites: Nil

Co-requisites: Nil

SECTION 2 – ACADEMIC DETAILS

Subject Rationale

This foundational Herbal Medicine subject introduces students to the study of plant medicine via an exploration of botany. Through an understanding of basic plant morphology, botanical terminology, taxonomy, and nomenclature, students learn to recognise similar and different physical characteristics of plants and to identify plant specimens. Additionally students are introduced to the legislative and regulatory frameworks that govern the manufacture and sale of botanical medicines in Australia.

Learning Outcomes

1. Identify plant specimens based on an understanding of plant morphology and botanical taxonomy.
2. Demonstrate an understanding of the environmental influences on the quality of plant materials used in clinical herbal practice.
3. Critically evaluate the various pharmaceutical forms for administration of herbs therapeutically and their appropriateness to different health conditions.
4. Discuss current Australian legislation as it relates to the growing, manufacture, dispensing and dosage of herbs for therapeutic administration.

Assessment Tasks

Type	Learning Outcomes Assessed	Weeks Content Delivered	Week Due	Weighting
Quizzes x 5	1-4	1-12	2,5,9,11,13	50%

(multiple choice questions and short answer questions – 30 mins)				(10% each)
Final Exam	1-4	1-13	Final Exam Period	50%
Active participation in this subject is critical to ensure achievement of required outcomes. To achieve this, students will need to participate in at least 80% of online discussion forums .				

Prescribed readings:

1. Capon, B. (2010). *Botany for gardeners* (3rd ed.). Portland, OR: Timber Press. [ebook available]

Recommended readings:

1. Fisher, C. (2009). *Materia medica of western herbs*. Nelson, NZ: Vitex Medica.
2. Lassak, E. V., & McCarthy, T. (2011). *Australian medicinal plants: A complete guide to identification and usage* (2nd ed.). Chatswood, NSW: Reed New Holland.
3. Van Wyk, B-E., & Wink, M. (2004). *Medicinal plants of the world: An illustrated guide to important medicinal plants and their uses*. Portland, OR: Timber Press.
4. Wiart, C. (2006). *Medicinal plants of Asia and the Pacific*. Boca Raton, FL: CRC Taylor & Francis. [ebook available]
5. Williams, C. (2010). *Medicinal plants in Australia: Bush pharmacy* (Vol. 1). Kenthurst, NSW: Rosenberg Publishers. [ebook available]
6. Williams, C. (2011). *Medicinal plants in Australia: Gums, resins, tannins and essential oils* (Vol. 2). Dural, NSW: Rosenberg Publishers. [ebook available]
7. Wink, M., & Van Wyk, B. (2008). *Mind-altering and poisonous plants of the world*. Portland, OR: Timber Press.

Subject Content

Week	Lecture	Tutorial
1.	<p>Introduction to plant taxonomy and botanical nomenclature</p> <p>What is botany? Why do we need to study it?</p> <p>What is taxonomy? Why do we need it? How was it developed?</p> <p>Phylogeny and the Theory of Evolution</p> <p>The 5 Kingdoms</p> <p>Plant diversity and the 10 Plant Divisions</p> <ul style="list-style-type: none"> • What is nomenclature? How is it applied to herbal medicine? Why is it so important? 	Online discussion post
2.	<p>Plant morphology Part I:</p> <p>Definition of Monocotyledons (Monocots) and Dicotyledons (Dicots).</p> <p>The specific differences between Monocots and Dicots with specificity to plant morphological structures (seeds, roots, stems, leaves, flowers etc.).</p> <ul style="list-style-type: none"> • Seeds- Function and morphology. 	Botany Practical:
3.	<p>Plant morphology Part II:</p> <p>Definition of Fibrous and Tap root systems.</p> <p>Root anatomy.</p> <p>Root modifications.</p>	Online discussion post

	<p>The concept of Geotropism.</p> <p>The functions of roots (support, absorption, hormone production, storage etc.).</p>	
4.	<p>Plant morphology Part III:</p> <p>Stem anatomy (nodes, internodes).</p> <p>Stem modifications (stolons, rhizomes, tubers, corms and cladodes).</p> <p>The function of the Stem</p> <p>The theory of Phototropism and Apical dominance.</p>	Online discussion post
5.	<p>Plant morphology Part IV:</p> <p>Leaf anatomy (Lamina, petiole, axis, mid-rib etc.)</p> <p>Leaf characteristics (Structure, attachment, arrangement, shape, venation and margin).</p> <p>The functions of leaves</p> <p>Leaf modifications (Tendrils, spines, bracts).</p> <p>The theory behind Photosynthesis.</p>	Online discussion post
6.	<p>Plant morphology Part V:</p> <p>The anatomy of flowers and inflorescences.</p> <p>Floral structures and their associated functions.</p> <p>Flower pollination.</p> <p>The evolutionary advantage of Flowering plants.</p>	Online discussion post
7.	<p>Virtual Field trip to a Herbarium</p> <p>Students refer to the Australian Virtual Herbarium (AVH).</p>	Online discussion post
<p>NON-TEACHING WEEK</p> <p>Online Students- The break week falls between Weeks 7 and 8.</p>		
8.	<p>Plant morphology Part VI:</p> <p>Fruit formation and structure.</p> <p>The functions of fruit.</p> <p>The types of fruit.</p> <p>Methods of dispersal (Air, water, animal etc.).</p>	Online discussion post
9.	<p>Plant families (Monocots):</p> <p>Examine the various spotting characteristics of members of the Liliaceae, Zingiberaceae and Gramineae families</p> <p>Identify the various medicinal herbs of each family.</p> <p>Authentication / identification via botanical keys (where applicable) of the medicinal herbs within each family.</p>	Online discussion post
10.	<p>Plant families (Dicots Part I):</p> <p>Examine the various spotting characteristics of members of the <i>Ranunculaceae</i>, <i>Myrtaceae</i>, <i>Papaveraceae</i> & <i>Cruciferae</i> families</p> <p>Identify the various medicinal herbs of each family.</p> <p>Authentication / identification via botanical keys (where applicable) of the medicinal and indigenous herbs within each family.</p>	Online discussion post
11.	<p>Plant families (Dicots Part II):</p> <p>Examine the various spotting characteristics of members of the (Perigynous): Leguminosae,</p>	Online discussion post

	<p>Rosaceae; (Hypogynous): Lamiaceae, Scrophulariaceae & Solanaceae families</p> <p>Identify the various medicinal herbs of each family.</p> <p>Authentication / identification via botanical keys (where applicable) of the medicinal herbs within each family.</p>	
12.	<p>Plant families (Dicots Part III):</p> <p>Examine the various spotting characteristics of members of the (Epigynous): Asteraceae, Apiaceae and Polygonaceae; (Non-Angiosperms): Pinaceae, & Equisetaceae families</p> <p>Identify the various medicinal herbs of each family.</p> <p>Authentication / identification via botanical keys (where applicable) of the medicinal herbs within each family.</p>	Online discussion post
13.	<p>Poisonous and restricted (Scheduled) medicinal plants:</p> <p>Discuss what makes a plant poisonous.</p> <p>Examine the traditional uses of the selected poisonous plants.</p> <p>Examine the various spotting characteristics of a number of poisonous plants and fungi.</p>	Online discussion post
14.	Study Week/Practical Exam Week 1. Note that make-up classes may be scheduled in this week.	
15.	Study Week/Practical Exam Week 2. Note that make-up classes may be scheduled in this week.	
16.	Final Exam Week 1 Please refer to your Campus Timetable for the exact time and day of the final exam	
17.	Final Exam Week 2 Please refer to your Campus Timetable for the exact time and day of the final exam	