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| Course Code:        | 1805NRS                       |
| Course Name:        | Human Anatomy & Physiology 1  |
| Trimester:          | Health Care Trimester 1, 2018 |
| Program:            | Diploma of Health Care        |
| Credit Points:      | 10                            |
| Course Coordinator: | Dr Jos De Schepper            |
| Document modified:  | January 2018                  |

### Teaching Team

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Your lecturer/tutor can be contacted via the email system on the portal.

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### Staff Consultation

Your lecturer/tutor is available each week for consultation outside of normal class times. Times that your lecturer/tutor will be available for consultation will be given in the first week of lectures. A list of times and rooms will be published on the Griffith College Portal under the “myTimetable” link.

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## **Prerequisites**

There are no prerequisites for this course

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## **Brief Course Description**

### Course outline

Professional practice in a range of health disciplines is underpinned and informed by knowledge and understanding of anatomy and physiology. Students investigate key foundational physiological principles, the organisational levels in the body, the structure and function of the normal human body and the relevance of such knowledge to the maintenance of human health. Changes to the body across the lifespan are also explored. Core concepts are taught using an integrated and exploratory approach to facilitate the ability of students to transfer, assimilate and utilise knowledge gained in this course to other courses within their program, and to apply what they have learnt to nursing practice. This course addresses the generic skills of the Griffith Graduate by enhancing the students ability to work autonomously and in teams, communicate effectively, and problem solve as well as develop professional responsibility.

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## **Rationale**

A sound knowledge and understanding of anatomy and physiology is essential for health care students. Firstly it provides a foundation for applying skills used in health assessment. Secondly it enables the student to move seamlessly into the study of pathophysiology in subsequent human health and nursing studies.

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## **Aims**

The principal aim of this course is to develop students' knowledge and understanding of the normal anatomy and physiology of the human body and the relevance of such knowledge to the maintenance of health in order to inform effective nursing practice.

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## **Learning Outcomes**

After successfully completing this course you should be able to:

1. Explain key foundation physiological principles related to the human body;
2. Describe the chemical, cellular, tissue and organ system levels of organisation of the human body;
3. Using appropriate terminology, identify the key anatomical structures and explain the key physiological functions of the following systems:

- a. integumentary,
  - b. skeletal,
  - c. endocrine,
  - d. nervous,
  - e. muscular,
  - f. haematological, and
  - g, immune.
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## **Texts and Supporting Materials**

### **Required Texts:**

- O'Loughlin, V., Bidle, T., & McKinley, M. (2016). Anatomy & Physiology: An Integrative Approach. 2nd edition. New York: McGraw-Hill.
- Human Anatomy & Physiology I Workbook will be located on the 1805NRS MyStudy course site.

### **Recommended Readings:**

The DHC teaching team strongly recommends students use the on-line websites associated with the prescribed text.

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## **Organisation and Teaching Strategies**

The two main teaching and learning strategies are engagement and blended learning. Teaching methods will include a combination of face-to-face strategies: interactive lectures, laboratories and/or tutorials. Students are also encouraged to utilise web materials including designated self-directed activities and worksheets. The teaching methods have been designed to facilitate the development of a strong knowledge base in anatomy and physiology. Students will gain skills in team work and problem solving in the laboratory setting.

It is standard practice at Griffith College that lectures timetabled in lecture capture-enabled venues are recorded and made available to students on the relevant course site. Lecture Captured sessions are not intended as a substitute for a Lecture. Students are encouraged to attend the lectures in real time and use Lecture Capture as supplementary.

## **Class Contact Summary**

Classes for Human Anatomy & Physiology 1 include the following:

- \* **Lectures:** 2 hours per week (week 1 - 10)

- \***Combined Workshop:** 1 hour per week (1 – 10)
- \* **Tutorials:** 1 hour per week (1 - 10)
- \* **Revision tutorial:** 2 hours in week 11 only
- \* **Workshops:** 2 hours per week (2 - 10)
- \* **Laboratory sessions:** 6 x 2 hours (Weeks 2, 3, 4, 5, 8 & 10)

### **PRIOR TO COMMENCING LABORATORY CLASSES**

Students must complete the on-line modules for workplace health and safety for Griffith University labs and submit the certificate of completion for "**Student Basic Health & Safety Induction**" and "**Health Lab Induction**" before the first laboratory session.

### **100% ATTENDANCE AT LABORATORY CLASSES IS ESSENTIAL**

The laboratory component of the course introduces the students to kinaesthetic activities that students report are helpful to understanding complex biological concepts. Preparation of your 1805NRS Workbooks are enhanced by completing laboratory tasks and module worksheets, including online learning aids to suit students busy extracurricular lifestyle, whilst identifying areas that they need to work on to understand imperative concepts. Each of the modules is supported with web-based materials see the Griffith College MyStudy site for this course.

If you are unable to attend a Lab for extenuating reasons you will be required to submit evidence explaining any absence (e.g. medical certificate). Students who miss a lab will be required to **present the relevant completed 1805NRS Workbook section in tutorial class and** have it checked and signed off by their tutor, before the next consecutive lab.

A maximum of one laboratory session may be missed (with documentary evidence). If more than one lab session is missed, consultation with the Course Coordinator and/or Program Convenor will be required to determine if it is appropriate for you to continue in the course.

Students will work in small groups to analyse experiments and develop problem solving skills. Content covered in the laboratories will be assessed within the intra trimester and final examinations. An attendance roll will be maintained for all lab classes. Students are expected to attend their scheduled laboratory class.

### **Health and safety regulations stipulate that students MUST WEAR COMPLETELY CLOSED-IN SHOES AND LABORATORY COATS TO ALL LABORATORIES.**

Students will not be permitted to enter a laboratory with open footwear (sandals, toeless or backless shoes). If you fail to follow the health and safety instructions within the lab you may be excluded from the laboratory session.

### **Attendance**

**100% attendance is expected for all classes.** You are reminded that your attendance in class will be marked for all elements. To receive full attendance, you must be present in the classroom on all occasions.

You are expected to bring work done at home to class for group and individual discussion. Further development of ideas is expected during tutorial/workshop time.

### **Preparation and Participation in Class**

You are expected to read your text book and the lecture notes plus attempt any tutorial/workshop/lab exercises before class so that each week you can actively contribute to your learning and the learning of others in your classes. You are expected to ask and answer questions and to initiate discussions and stimulate debate in group and class situations.

### **Consultation Times**

Attendance during consultation times is optional but you are encouraged to use this extra help to improve your learning outcomes.

### **Course Materials**

**Lecture notes** will be made available to you on the Griffith College MyStudy website and you are advised to print these out and bring them to each class so that extra notes can be added.

**1805NRS Workbooks** will be made available to you on the Griffith College MyStudy website. You should print these out, complete the pre-tutorial section and **BRING** them to your tutorial classes.

### **Independent Study**

Independent study requires that you spend time outside classes engaged in research necessary to complete your studies. Research includes reading the required text books, and using library and internet facilities. For this 10 CP course, you will need to spend at least 10 hours per week engaged in activities that will help your learning and fulfil the course objectives. Thus, provided you have well used the formal contact hours each week, you would then complete any remaining hours engaged in independent study.

### **Program Progression**

You are reminded that satisfactory Program Progression requires that attendance in classes is maintained at equal to or greater than 80%, and that GPA is maintained at equal to or greater than 3.5 in any trimester [please see Griffith College Policy Library - Program Progression Policy - for more information].

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## Content Schedule

### Weekly Teaching Schedule

| Week | Topic  | Activity   | Readings  |
|------|--|------------|---|
| 1    | Introduction to Anatomy & Physiology   | Lecture    | Course text: Chapter 1  |
|      | Body Systems, Anatomical terminology, Homeostasis, Cell structure and function     | Tutorial   | Bring 1805NRS Workbook  |
|      | Introduction to the course and assessment; Review Course Content, Module 1 Topic 1 | Workshop   | Module 1 Topic 1  |
| 2    | Intro to Cell Nucleus, DNA, Chemistry of Life                                      | Lecture    | Course text: Chapter 2: Atoms, Ions, and Molecules Chapter 4: Biology of the Cell pp.102-134 Chapter 4: Biology of the Cell pp.135-150. |
|      | The Cell & Organelles, The Nucleus; Chemistry of life (Atoms, Ions, Molecules, pH) | Tutorial   | 1805NRS Workbook  |
|      | Module 2 Topic 2 & 3 Review  | Workshop   | Concept drawings  |
|      | Lab 1: Introduction to A&P Body Systems; Anatomical terminology;                   | Laboratory | 1805NRS Workbook  |
| 3    | Tissues & Integumentary  | Lecture    | Course text: Chapter 5: Tissue Organization Chapter 6: Integumentary System   |
|      | Four tissue types, Tissue repair, Structure & Function - skin                      | Tutorial   | 1805NRS Workbook  |

|   |   |            |   |
|---|---|------------|---|
|   | Module 2 Topic 3<br>Module 3 Topic 1<br>Review                                  | Workshop   | Concept drawings  |
|   | Lab 2:<br>Homeostasis; Rat<br>Dissection  | Laboratory | 1805NRS Workbook  |
| 4 | Skeletal System   | Lecture    | Course text: Chapter 7, 8 & 9                           |
|   | Skeletal System<br>Review   | Tutorial   | 1805NRS Workbook  |
|   | Module 3 Topic 3<br>Review  | Workshop   | Concept drawings  |
|   | Lab 3: Cells,<br>Membrane<br>transport, Tonicity,<br>pH, & Tissues              | Laboratory | 1805NRS Workbook  |
| 5 | Fundamentals of the<br>Nervous System   | Lecture    | Course text: Chpt 12: Nervous<br>System; Nervous Tissue |
|   | Action Potentials &<br>Neurotransmitters  | Tutorial   | 1805NRS Workbook  |
|   | Intra-trimester<br>exam Prep  | Workshop   | Concept drawings  |
|   | Lab 4:<br>Integumentary &<br>Skeletal Systems                                   | Laboratory | 1805NRS Workbook  |
| 6 | The Central<br>Nervous System   | Lecture    | Course text: Chapter 13/14                              |
|   | Brain functional<br>areas, Spinal Cord,<br>Cranial nerves,                      | Tutorial   | 1805NRS Workbook  |
|   | Module 3 Topic 4<br>Review  | Workshop   | Concept drawings  |
| 7 | The Peripheral<br>Nervous System<br>(PNS)                                       | Lecture    | Chapter 15/16   |
|   | Spinal nerves,<br>dermatomes, nerve<br>plexuses,<br>Autonomic Nervous<br>System | Tutorial   | 1805NRS Workbook  |

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|----|---|------------|----------------------------|
|    | Module 3 Topic 5 Review                                 | Workshop   | Concept drawings           |
| 8  | The Endocrine System                                    | Lecture    | Course text: Chpt 17       |
|    | Endocrine glands and organs, Hormones and their effects | Tutorial   | 1805NRS Workbook           |
|    | Module 3 Topic 6 Review                                 | Workshop   | Concept drawings           |
|    | Lab 5: The Nervous System & Muscular innervation        | Laboratory | 1805NRS Workbook           |
| 9  | The Muscular System                                     | Lecture    | Course text: Chpt 10 & 11  |
|    | Structure, function and types of muscles                | Tutorial   | 1805NRS Workbook           |
|    | Module 3 Topic 7 review                                 | Workshop   | Concept drawings           |
| 10 | Haematology & Immunology                                | Lecture    | Course text: Chpts 18 & 22 |
|    | Haematology/Innate and adaptive immunity                | Tutorial   | 1805NRS Workbook           |
|    | Module 4 Topic 1 & 2 Review                             | Workshop   |                            |
|    | Lab 6: Haematology, Immunology & Microbiology           | Laboratory | 1805NRS Workbook           |
| 11 | Optional Revision session 2 hrs                         | Class      |                            |

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## Assessment

This section sets out the assessment requirements for this course.



## Summary of Assessment

| Item | Assessment Task       | Weighting | Relevant Learning Outcomes | Due Date                 |
|------|-----------------------|-----------|----------------------------|--------------------------|
| 1    | Weekly quizzes        | 20%       | 1,2,3                      | Weeks 1 - 10             |
| 2    | Intra-Trimester Exam  | 30%       | 1,2&3                      | Week 6                   |
| 3    | End of Trimester Exam | 50%       | 1,2and3                    | Final Examination Period |

## Assessment Details

Overall assessment in this course is designed to ensure students have attained the learning outcomes for the course. As this course is designed to provide foundational knowledge in biological sciences, students will be assessed primarily on their knowledge and understanding of anatomy and physiology of the human body.

### 1. Weekly Quizzes

Rationale: These quiz items are designed to assist students studying biological sciences as they relate to nursing. Quizzes have been designed to guide student learning and to enhance learning outcomes in this course. Students will receive early and regular feedback on their performance.

Assessment details: Each quiz consists of ten questions. The question style includes multiple choice, matching and labelling. There are ten quizzes, worth 2% each.

Marking criteria: Each quiz will be marked in accordance with pre-determined model answers that have been internally moderated.

### 2. In-Trimester Examination

Rationale: This individual assessment item is designed to assess the knowledge and understanding of the core concepts covered in the first part of the trimester. Including Learning Outcomes 1, 2, 3.

Assessment details: This assessment item will contain a variety of questions including multiple choice and short answer questions/responses. This is an open book exam, however, students can ONLY BRING their own completed 1805NRS Workbook as the open book resource. These 1805NRS Workbooks contain activities and also diagrams and questions to be answered with the support of students' text, tutor and tutorial activities. 1805NRS Workbooks will be reviewed in the tutorial. Please note that content will focus on tutorial activities and laboratories, including identification of anatomical structures, knowledge of anatomy, problem solving activities and analysis of experiments.

Marking criteria: This exam will be marked following a strict marking guide and will undergo a full moderation process.

### **3. Final Examination**

Rationale: This individual assessment item is designed to assess the knowledge and understanding of the core concepts covered throughout the entire trimester. The exam will assess student learning stemming from core concepts covered in lectures, worksheets and laboratories presented during the whole course. Please note that content covered in laboratories will be assessed including identification of anatomical structures, knowledge of anatomy, problem solving activities and analysis of experiments.

Assessment details: The exam will consist of multiple choice questions, short answer questions and anatomical diagram labelling.

Marking criteria: This exam will be marked following a strict marking guide and will undergo a full moderation process.

Further details on assessment will be provided to students via the course site on Griffith College's Student Portal and in classes during the trimester.

#### **Requirements to pass the course:**

In order to pass this course and **in addition to meeting the laboratory attendance and participation requirements**, a student must:

- a. attempt at least one weekly quiz, AND**
- b. attempt the in-trimester and end of trimester exam, AND**
- c. achieve a minimum cumulative total of 50% from all graded assessments.**

#### **Submission and Return of Assessment Items**

All assessment is to be submitted at the date and time designated by your teacher. Normally you will be able to collect your assessment in class within fourteen [14] days of the due date for submission of the assessment

#### **Retention of Originals**

Where practical, you must be able to produce a copy of all work submitted if so requested. Copies should be retained until after the release of final results for the course.

Please note: You may be required to submit assignments electronically to a collusion detection tool to allow the detection of possible instances of collusion/plagiarism. This will also involve Griffith College or its nominee storing your work on a secure database for use in testing assessment submitted by others in the future. For further information on Griffith College's Academic Integrity Policy refer to Griffith College's online Policy Library.

## **Extensions**

To apply for an extension of time for an assessment item you must submit a written request to your lecturer via the Student Website at least 48 hours before the date the assessment item is due. Grounds for extensions are usually: serious illness, accident, disability, bereavement or other compassionate circumstances and must be able to be substantiated with relevant documentation [e.g. medical certificate]. Please refer to the Griffith College website - Policy Library - for guidelines regarding extensions and deferred assessment.

## **Penalties for late submission without an approved extension**

Penalties apply to assignments that are submitted after the due date without an approved extension. Assessment submitted after the due date will be penalised 10% of the TOTAL marks available for assessment (not the mark awarded) for each day the assessment is late. Assessment submitted more than five days late will be awarded a mark of zero (0) For example:

- > 5 minutes and  $\leq$  24 hours 10%
- > 24 hours and  $\leq$  48 hours 20%
- > 48 hours and  $\leq$  72 hours 30%
- > 72 hours and  $\leq$  96 hours 40%
- > 96 hours and  $\leq$  120 hours 50%
- > 120 hours 100%

Note:

- Two day weekends will count as one day in the calculation of a penalty for late submission.
- When a public holiday falls immediately before or after a weekend, the three days will count as one day in the calculation of a penalty for late submission.
- When two public holidays (e.g. Easter), fall immediately before or after, or one day either side of a weekend, the four days will count as two days in calculating the penalty for late submission.
- When a single public holiday falls mid-week, the day will not be counted towards the calculation of a penalty.

Please refer to the Griffith College website - Policy Library > Assessment Policy for guidelines and penalties for late submission.

## **Assessment Feedback**

Your assessment will be marked so that you can learn from your work. Feedback will be

provided so that you can see the level you have reached in any skill. Your tutor will provide comments on your work and will be happy to discuss your assessment further, if you wish. You may see your tutor in his/her consultation time.

Marks awarded for assessment items will also be available on the on the Griffith College Student Portal within fourteen [14] of the due date for submission of the assessment.

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## Generic Skills

Griffith College aims to develop graduates who have an open and critical approach to learning and a capacity for lifelong learning. Through engagement in their studies, students are provided with opportunities to begin the development of these and other generic skills.

Studies in this course will give you opportunities to begin to develop the following skills:

| Generic Skills                   | Taught | Practised | Assessed |
|----------------------------------|--------|-----------|----------|
| Written Communication            |        | Yes       | Yes      |
| Oral Communication               |        | Yes       |          |
| Information Literacy             | Yes    | Yes       | Yes      |
| Secondary Research               | Yes    | Yes       | Yes      |
| Critical and Innovative Thinking | Yes    | Yes       | Yes      |
| Academic Integrity               | Yes    | Yes       | Yes      |
| Self Directed Learning           |        | Yes       | Yes      |
| Team Work                        |        | Yes       |          |
| Cultural Intelligence            |        | Yes       |          |
| English Language Proficiency     |        | Yes       | Yes      |

## Additional Course Generic Skills

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### Additional Course Information

Your feedback is respected and valued by your lecturers and tutors. You are encouraged to provide your thoughts on the course and teaching, both positive and critical, directly to your lecturer and tutor or by completing course and lecturer evaluations on the Griffith College portal whenever these are available.

Student feedback on their courses can be found by going to ‘Student feedback’ under Support in the Griffith College Student Portal.

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## **Academic Integrity**

Griffith College is committed to maintaining high academic standards to protect the value of its qualifications. Academic integrity means acting with the values of honesty, trust, fairness, respect and responsibility in learning, teaching and research. It is important for students, teachers, researchers and all staff to act in an honest way, be responsible for their actions, and show fairness in every part of their work. Academic integrity is important for an individual's and the College's reputation.

All staff and students of the College are responsible for academic integrity. As a student, you are expected to conduct your studies honestly, ethically and in accordance with accepted standards of academic conduct. Any form of academic conduct that is contrary to these standards is considered a breach of academic integrity and is unacceptable.

Some students deliberately breach academic integrity standards with intent to deceive. This conscious, pre-meditated form of cheating is considered to be one of the most serious forms of fraudulent academic behaviour, for which the College has zero tolerance and for which penalties, including exclusion from the College, will be applied.

However, Griffith College also recognises many students breach academic integrity standards without intent to deceive. In these cases, students may be required to undertake additional educational activities to remediate their behaviour and may also be provided appropriate advice by academic staff.

As you undertake your studies at Griffith College, your lecturers, tutors and academic advisors will provide you with guidance to understand and maintain academic integrity; however, it is also your responsibility to seek out guidance if and when you are unsure about appropriate academic conduct.

In the case of any allegation of academic misconduct made against a student he or she may request the guidance and support of a Griffith College Student Learning Advisor or Student Counsellor.

Please ensure that you are familiar with the [Griffith College Academic Integrity Policy](#); this policy provides an overview of some of the behaviours that are considered breaches of academic integrity, as well as the penalties and processes involved when a breach is identified.

For further information please refer to the Academic Integrity Policy on the Griffith College website – Policy Library.

## **Risk Assessment Statement**

This course follows Griffith College and Griffith University Workplace Health and Safety Laboratory guidelines.

The aim of workplace health and safety is to make sure that people do not get sick or injured at the workplace. The legislation dealing with this in Queensland is called the Workplace Health and Safety Act, 1995. Anyone who can affect workplace health and safety has an obligation under this Act.

As a student, you have an obligation to yourself and others to undertake activities in a safe manner. You must follow instructions which are provided for safety. You must not put yourself or anyone else at risk. Care especially needs to be taken when you are performing activities which can affect others. Please refer to the Laboratory Rules for Diploma of Health Care – available on the course site via the Griffith College Student Portal.

**Students must wear closed in shoes to all laboratory sessions for workplace health and safety reasons.**

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