

**UNIVERSITY OF TORONTO**  
**WILD NIGHTS: SLEEP, EVOLUTION, AND PERFORMANCE IN THE 21<sup>ST</sup> CENTURY**  
**Fall 2022: ANT 402H5**

**Meeting Times and Location**

MN 2266

Thursday 3:00 PM - 5:00 PM

**Instructor Information**

Instructor:

Dr. David R. Samson

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Office phone:

(905) 569-4295

Office location:

HSB 358

Course website:

<https://q.utoronto.ca/>

Office hours:

Tuesday 12:30 AM – 2:30 AM

TA:

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***“If sleep does not serve an absolute vital function, then it is the biggest mistake the evolutionary process ever made.”***

~Allan Rechtschaffen

**COURSE DESCRIPTION:**

Sleep is essential to cognitive function and health in humans, yet the ultimate reasons for sleep – that is, ‘why’ we sleep – remains mysterious. This course integrates research findings from human sleep studies, the ethnographic record, and the ecology and evolution of mammalian and primate sleep to better understand sleep along the human lineage and in the modern world. Students will learn how to use ‘wearable’ technology, such as actigraphy, for scientific research. The goal of the course is to empower students with the theoretical and technological tools to be able to not only critically assess their own sleep-wake behaviour and performance but also popular generalizations about how to maximize long-term health outcomes.

## **COURSE OBJECTIVES:**

Upon completion of the class, the students will have:

- A general knowledge of mammalian, primate, and human sleep.
- A basic understanding of the evolutionary mechanisms driving variation in sleep expression within the primate order – and especially in humans.
- Familiarity with the cutting-edge biometric technology as well as statistical and quantitative methods to measure their own sleep-wake activity.
- Gained knowledge and experience of how to design and execute hypothesis driven research projects that produce manuscripts with the potential to be peer-reviewed.

## **COURSE READINGS:**

I rely on two textbooks that will be available online through the UTM library. These will serve students as good background resources and will be important to review for the quizzes:

*Principles and Practice of Sleep Medicine* (Sixth Edition): Kryger, Roth and Dement. 2017. (Schedule abbreviation: PPSM)

*Circadian Physiology* (Third Edition): Refinetti. 2016. (Schedule abbreviation: CP)

“Primary reading” articles are scientific papers that will complement the lectures. I have the right to change these up until the week before they are due and several weeks are TBA. This is so I can adjust these readings to reflect discussions prompted from lectures. PDFs of readings will be placed on Quercus and you will be able to know which readings are required before class.

WEEK	LECTURE TOPIC	DISCUSSION TOPIC
1	September 8 Topic 1: Class introduction	Text reading: PPSM Ch. 1; CP Ch. 1 Primary reading: Roenneberg et al. 2007 <b>QALMRI exercise</b> <b>Assign groups</b>
2	September 15 Topic 2: Historical overview & Normative sleep and circadian patterns <b>QUIZ #1</b>	Text reading: PPSM Ch. 2; CP Ch. 5 Primary reading: Ohayon et al 2004; Samson 2021 <b>Discussion: Candlelight challenge experimental protocol</b>
3	September 22 Topic 3: Mechanism of sleep and circadian physiology <b>QUIZ #2</b>	Text reading: PPSM Ch. 7; CP Ch. 11 Primary reading: TBA <b>Fit Oura rings</b> <b>Discussion: Data entry demonstration (class spreadsheet)</b>
4	September 29 Topic 4: The function of sleep, or why be inactive? & Comparative mammalian sleep <b>QUIZ #3</b>	Text reading: CP Ch. 8; CP Ch. 12 Primary reading: TBA <b>Discussion: Data recording graded compensation VS meta-analysis paper submission option</b> <b>Discussion: Statement of Significance</b> <b>EXPERIMENT START: Cognitive test 1: Control group (Alpha, Delta) / Experiment group (Beta, Shrew)</b>
5	October 6 Study Design Workshop <b>QUIZ #4</b>	Text reading: PPSM Ch. 49; CP Ch. 2 <b>Due: Statement of Significance (5%)</b> <b>Cognitive test 2: Control group (Alpha, Delta) / Experiment group (Beta, Shrew)</b>
6	October 13 <b>READING WEEK</b> <b>Cognitive test 1: Control group (Beta, Shrew) / Experiment group (Alpha, Delta)</b>	
7	October 20 Topic 5: How to measure primate sleep: methods, technology, and analysis Science: How do we do it? How do we communicate it? <b>QUIZ #5</b>	Text reading: PPSM Ch. 37, 160 & 170 Primary reading: Platt 1964; McMillan 2012; Samson et al. 2016; Samson science writing guide <b>EXPERIMENT END: Cognitive test 2: Control group (Beta, Shrew) / Experiment group (Alpha, Delta)</b>
8	October 27 Topic 6: Extant nonhuman primate sleep ecology <b>QUIZ #6</b>	Text reading: CP Ch. 10 Primary reading: Samson and Shumaker 2015; Nunn and Samson, 2018 <b>Discussion: Biohacking mismatch assignment</b>
9	November 3 Topic 7: Human sleep ecology <b>QUIZ #7</b>	Text reading: PPSM Ch. 5; CP Ch. 15 Primary reading: Prall et al. 2018, Samson et al 2017 <b>Due: Data recording, day/dream reports, surveys submissions OR meta-analysis</b>
10	November 10 Topic 8: Sleep, cognition, and human evolution and sleep disorder <b>QUIZ #8</b>	Text reading: PPSM Ch. 61; CP Ch. 16 Primary reading: TBA <b>Data analysis</b>
11	<b>November 17</b> <b>QUIZ #9 (based off Data-workshop)</b> <b>Data workshops</b> <b>Due: Biohacking mismatch assignment</b> <b>Note: last day to drop class this week</b>	
12	<b>November 24</b> <b>QUIZ #10 – cumulative</b> <b>Group presentations</b>	
13	<b>December 1</b> <b>Group presentations</b>	<b>Final reports due</b>

## The Candlelight Challenge

- Oura rings will be sized and fitted and apps downloaded in week three.
- The control groups will experience their normal sleep schedules
- The experimental groups will experience **The Candlelight Challenge**
  - a. **Sleep hygiene:**
    - i. Your sleeping chambers should be cool ~18-20 C°
    - ii. Your sleeping chambers should be devoid of stimulus
    - iii. Do not drink caffeinated beverages after noon
    - iv. During your wind down period an hour before your bedtime (see below), you cannot watch TV, use your smartphone, or read ereaders (but normal books are encouraged) while reading in bed
    - v. Use blue light blocking glasses, eye masks, and ear plugs if you have roommates
  - b. **Light hygiene:**
    - i. Get a minimum of 30 minutes of outside daylight
    - ii. Upon sunset you will make a best effort to only use candles or warm light wave frequency electric sources of lighting
  - c. **Circadian amplification:**
    - i. *Metabolism:* Eat -3 hours before bedtime. That is, your last morsel of food should be consumed a minimum of three hours before you attempt to fall asleep. If your bedtime range is 10-11 pm, then you want your last food (including alcoholic beverages or any beverage with heavy caloric content) is between 7-8 pm.
    - ii. *Sleep compression:* sometimes you have to deny sleep to reset your rhythm. To do this, for the first few nights of your new schedule go to bed at your normal time, but wake up purposefully hours before you regularly would; don't take naps during the day. The short "compressed" sleep bouts will build up your sleep drive and help get you on schedule
    - iii. *Consistency:* Bed and wake up at the same time each evening and morning; your bedtime will be consistently between 10-11 pm and you will set an alarm an hour before your chosen bedtime to 'wind down'. You will attempt to wake up sometime around dawn;
    - iv. *Exercise:* Do not perform physical exercise too close to bedtime
    - v. *Vices:* We all have them. If you drink, eat sugary foods, or play video games, do it when your physiology is best equipped to process the input. For most of these types of activities, that hinge on metabolic rhythms, you are best able to process sugar and alcohol at peak noontime. As for video games, you should be getting peak blue wave light during the midpoint of the day. So a noon gaming start time is optimal.
- **Cognitive tests:**
  - a. They will be taken at the same time each day between 9:00 – 10:00 am 5 times a week Monday through Friday. **Attention Test:** "Gradual Onset Continuous Performance Test". **Social Test:** "Morphed Face Emotion Identification".
    - i. [https://testmybrain.org/research\\_tools/](https://testmybrain.org/research_tools/)
    - ii. Username: research
    - iii. Password: testmybrain

- b. The “**ANT402 Multi-Year Spreadsheet**” spreadsheet will be used to record data daily.

### **Dream recording**

- Ten-day summaries & ten dream summaries (minimum) will be recorded throughout the data recording period
  - c. Day summaries will be submitted through this google form:  
<https://forms.gle/vfpKxe9iCxGm9Xbq8>
  - d. Dream summaries will be submitted through this google form:  
<https://forms.gle/ACCNQBm6GVoyyy97>

<b>Week</b>	<b>Control</b>	<b>Experiment</b>	<b>Cognitive Task</b>
4	Alpha, Delta	Beta, Shrew	Social
5	Alpha, Delta	Beta, Shrew	Inhibition
6	Beta, Shrew	Alpha, Delta	Social
7	Beta, Shrew	Alpha, Delta	Inhibition

### **Example model:**

**cognition ~ sleep + group + trial number +  
compliance**

## EVALUATION:

<b>Knowledge assessment (quizzes)</b>	Weekly	<b>20%</b>
<b>TA assessed: Completed data recording OR writing an additional paper</b>	Oct 27	<b>15%</b>
<b>Group Statement of Significance</b>	Oct 6	<b>5%</b>
<b>Bio-hacking mismatch assignment</b>	Nov 10	<b>20%</b>
<b>Group final paper</b>	Dec 1	<b>20%</b>
<b>Group oral presentation</b>	Nov24/Dec1	<b>20%</b>

### **KNOWLEDGE ASSESSMENT (QUIZZES): Weekly (Beginning September 15, 2020)**

Every week you will be given a 10-question quiz that you will have a window to take 48 hours before lecture. Quizzes will be knowledge assessment of that week's assigned readings. Throughout the course there will be ten such quizzes and they will be weighted to be 2% of your total grade per quiz (for a total sum of 20%) of your final grade.

### **COMPLETED DATA RECORDING OR ADDITIONAL WRITING TERM REVIEW PAPER**

#### ***OPTION 1: Study participation***

For your total grade, proper **data recording will be required of all the sleep variables (5%) and a signed consent form so that the data you are generating for the course can be used towards SHEL research projects.** You will be required to **fill out the Quercus based surveys (5%)** that will be used for the final course group project. In addition, throughout the data recording period where you will be tracking your sleep scores, you will be required to **submit at least ten day and dream summaries (5%):** This includes the day summary that will be a brief summary of your day ideally between 50-250 words. This should be completed once every day at an hour you prefer. In addition, you will be required to record a dream you recall following a night's sleep. Similar to the day summary, it should ideally be between 50-250 words. Your responses will be confidential. If you go this option, you are participating in research *as part of your learning experience* and thus you will get the 15% credit as a form of research compensation.

#### ***OPTION 2: Writing a term paper review paper***

For those who do not wish to participate in the SHEL research for course-graded compensation, you have the option of writing a term paper review. It will be worth the same as the combined credit above (15%) total. You will still have to submit all the data above, you will however not be graded on those submissions (the TA will still ensure you perform the data submissions as required for the rest of the students in the course to be able to test hypotheses). The term paper requirements are: **Select a review or meta-analysis primary literature peer reviewed paper that has to do with any of the sleep topics. Write a 4000-5000 word analysis on the paper (details on Quercus).**

### **GROUP STATEMENT OF SIGNIFICANCE: Due October 6**

You will be tasked with creating your own hypotheses and predictions that you will be able to test during the sleep study. During the first part of the course, you'll need to develop a *research question* somehow inspired by the course material that can be tested with the data we are generating in the Candlelight study. After the first third of the course is complete, I'll have each group turn in a 150 word *Statement of Significance* describing why your research question is worth investigating (5%).

## **BIO-HACKING MISMATCH ASSIGNMENT: Due November 10**

In this assignment you will be tasked with devising your own bio-hacking experiment, where you are the subject of an experimental intervention designed by you to somehow improve some aspect of your life you feel is out of misalignment. This assignment, which you will submit in Quercus, will be worth 20% of your final grade.

## **GROUP ORAL PRESENTATION: Due November 24, December 1**

Another core component of being a scientist is communicating your discoveries. Thus, you will be given the opportunity to give an oral presentation based on the research and report analysis. You will be graded on the quality of your group's powerpoint presentation, the timeliness of the lecture, and the clarity of your oral presentation. Finally, body language will be assessed to help maximize how you project yourself during public performance.

## **GROUP FINAL PAPER: Due December 1**

Arguably, one of the most important skills you develop as a student and scientist is writing and communicating your results in a clear and concise manner. Your group will be assessed on the quality of the final paper (20%). The paper will need to meet several requirements. You will describe in your paper your research question, hypotheses, and predictions and the methods you used to test the predictions. The paper will need to model articles published in the primary literature (i.e., peer reviewed journals). Acceptable (i.e., relevant to Physical Anthropology) journals include:

*American Journal of Physical Anthropology, American Journal of Primatology, American Journal of Human Biology, Human Biology, Animal Behaviour, Evolution of Human Behavior, Current Anthropology, Human Genetics, International Journal of Primatology*

Your paper must include:

1. A **cover page** with your name, date, class, and title of your paper.
2. An **abstract** (250 word maximum) concerning the purpose, aim or intent of the article, and what hypotheses (if any) were tested in the paper and the interpretation of the data analyzed.
3. An **introduction** which provides a thoroughly researched of the body of work for which to contextualize your contribution
4. A **methods** section, describing how you went about your study. Remember, it needs to be detailed enough to be reproducible by others.
5. A **results** section summarizing the data you generated for your study.
6. A **discussion (with conclusion)** section extrapolating your interpretation of the results you previous report. Here you compare and contrast your research with others, and attempt to make a cohesive argument for what you consider to be the answer to your original research question is. Include key findings, interpretations and problems from the study. Include points other authors may have made as well as your own critiques. The conclusion (last paragraph) should summarize your results. This is not to be parasitized from you abstract.
7. A **references cited** page (see below).

### **Format:**

There is no page requirement. That being said, a really good paper usually runs between 12 and 15 pages. Be concise and don't ramble to increase page length. Font should be times new roman and 12 point. Margins should be 1 inch. Remember to cite any quotations in your paper properly. Quotes are usually unnecessary. Express the conclusions of the authors using your own words (i.e., **paraphrasing**) then cite them properly (name, year: page #). Plagiarism is illegal and unethical. In

the text, references to the literature should be cited by author's surname followed by year of publication. If there are multiple citations, present them chronologically:

- . . . analysis by Ward (2001) reveal . . .
- . . . studies by Corner and Richtsmeier (2004) reveal . . .
- . . . studies by Little et al. (1993) reveal . . .
- . . . an earlier report (Hutchinson, 1999) . . .
- . . . earlier reports (Arriaza et al., 2000; Paoli et al., 2002; Ross, 2003) . . .

When references are made to more than one paper by the same author published in the same year, they should be designated in the text as (Benefit and McCrossin, 1993a,b) and in the Literature Cited as follows:

Benefit BR, McCrossin ML. 1993a. New Kenyapithecus postcrania and other primate fossils from Maboko Island, Kenya [abstract]. *Am J Phys Anthropol Suppl* 16:55–56.

Benefit BR, McCrossin ML. 1993b. On the lacrimalfossa of Cercopithecinae, with special reference to cladistic analysis of Old World monkey relationships. *Folia Primatol* 60:133–145.

See for specifics: <http://sspa.boisestate.edu/anthropology/files/2013/01/Style-GuideAJPA.pdf>



## **IMPORTANT COURSE INFORMATION**

### **Email correspondence**

Please use your utoronto.ca email address to ensure that your email messages are not filtered out by spam software and include "ANT402" in the contact line of your emails. I will try to reply to all appropriate emails within 48 hours. Keep your emails brief and come to see me during my office hours for longer discussions.

### **ASSIGNMENT SUBMISSION POLICY**

All assignments will be submitted electronically through Quercus to the University's plagiarism detection tool. This tool will compare textual similarities between your submitted work and other written sources and determine the percentage of the text of the paper that appears similar to other sources.

#### *Please Note:*

Normally, students will be required to submit their course essays to the University's plagiarism detection tool to review textual similarity and detect possible plagiarism. In doing so, students will allow their essays to be included as source documents in the tool's reference database, where they will be used solely for the purpose of detecting plagiarism. The terms that apply to the University's use of this tool are described on the Centre for Teaching Support & Innovation web site (<https://uoft.me/pdt-faq>). If students choose to opt out of submitting their essays to the University's plagiarism detection tool, they must notify the instructor. Students who choose to opt out of using the plagiarism detection tool must do so in writing by email to the course instructor before **September 15, 2022**. Assignments without plagiarism detection submission must be accompanied by an outline, first draft and an annotated bibliography to demonstrate the originality of the paper.

### **POLICY FOR LATE ASSIGNMENTS & QUIZZES**

**Late assignments** will be accepted with a late penalty of 10% per day (including weekends). No assignments will be accepted after 7 days. If you have a legitimate excuse for a late assignment, this course will be using the UTM Anthropology departmental process for special consideration.

**Quizzes** will be due before class the day lecture is given. Quizzes will be timed (10 minutes) and you will only have one opportunity to take them. There will be 10 quizzes in the course of the semester, one per week. Quizzes will be posted 48 hours before lectures, and you will be able to take the quiz anytime during that period. They will be based off of the primary readings on the syllabus in the black text. There will be no opportunity to "make up" quizzes.

Please see the Quercus documentation on how to prepare for quizzes.

<https://library.utm.utoronto.ca/students/quercus/learn-anywhere#Taking%20Quizzes>

**\*\*You MUST complete the online process through this system within 72 hours of the missed practical assignment.**

**\*\*\*Holidays and pre-purchased airplane tickets, family plans (unless there is a critical issue such as a death in the family), lack of student preparation, or the amount of work in other courses, are NOT acceptable excuses.**

## ACCESSABILITY ACCOMMODATION

The University provides academic accommodations for students with disabilities in accordance with the terms of the [Ontario Human Rights Code](#) and the AODA legislation 31F (Access for Ontarians with Disabilities Act, <http://www.aoda.ca>). Under the legislation, responsibility for ensuring accessibility is shared among all the players in the University: Accessibility Services, instructors, academic units and staff. Beyond our legislative obligations, the U of T takes pride in its serious commitment to those with disabilities. Our objective is an accessible learning environment that both meets the needs of students and preserves the essential academic integrity of the University's courses and programs. Students with an accessibility issue must consult with [UTM's Accessibility Services](#) in the Davis Building. Please contact the Accessibility Office at the beginning of your courses so that the proper supports are in place.

**FINAL MARKS** are tentative until approved by Dept. Chair and Dean's Office & recorded in Registrar's Office.

## The University of Toronto is committed to equity and respect for diversity

All members of the learning environment in this course should strive to create an atmosphere of mutual respect. As a course instructor, I will neither condone nor tolerate behaviour that undermines the dignity or self-esteem of any individual in this course and wish to be alerted to any attempt to create an intimidating or hostile environment. It is our collective responsibility to create a space that is inclusive and welcomes discussion. Discrimination, harassment and hate speech will not be tolerated. If you have any questions, comments, or concerns you may contact the UTM Equity and Diversity officer at [edo.utm@utoronto.ca](mailto:edo.utm@utoronto.ca) or the University of Toronto Mississauga Students' Union Vice President Equity at [vpequity@utmsu.ca](mailto:vpequity@utmsu.ca)

## NOTICE OF VIDEO RECORDING AND SHARING

*(Download permissible; re-use prohibited)*

Course videos and materials belong to your instructor, the University, and/or other source depending on the specific facts of each situation, and are protected by copyright. In this course, you are permitted to download session videos and materials for your own academic use, but you should not copy, share, or use them for any other purpose without the explicit permission of the instructor. For questions about recording and use of videos in which you appear please contact your instructor.

## STUDENT HEALTH & WELL-BELING SUPPORT

The [UTM Health & Counselling Centre](#) (HCC) offers services for students experiencing health and well-being concerns, including those related to COVID-19. Please call the HCC at 905-828-5255 to book an appointment. In addition, the [My Student Support Program](#) (MySSP) provides University of Toronto students with real-time and/or appointment-based confidential, 24-hour support for any school, health, or general life concern at no cost to students. You can call or chat with a counsellor directly from your phone whenever, wherever you are. Download the MySSP app at the Apple App Store or on Google Play. You can also access the service 24/7 by calling 1-844-451-9700. Outside of North America, call 001-416-380-6578. Ongoing support is available over the **phone** in 146 languages. Immediate support is available over the **phone** in 35 languages and over **chat** in simplified Chinese, English, French and Spanish. Web option is also available at [MySSP.app](#).

**TAPING/RECORDING/PHOTOGRAPHING LECTURES is not allowed.** Any material prepared by the instructor is considered by the University to be an instructor's intellectual property covered by the Canadian Copyright Act. **Students wishing to record lecture or other course material in any way are required to ask the instructor's explicit permission, and may not do so unless permission is granted.** This includes tape/audio/video recording, filming, photographing PowerPoint slides, Quercus materials, etc. Such permission is only for that individual student's own study purposes and does not include permission to "publish" them in any way. It is absolutely forbidden for a student to publish an instructor's notes to a website or sell them in other forms without formal permission.

**ACADEMIC SKILLS CENTER** If you need assistance with your academic proficiency (e.g. writing skills, note taking, time management, study techniques etc.) please do not hesitate to contact the [academic skills centre](#) for assistance.

### **RELIGIOUS OBSERVANCE ACCOMMODATION**

It is the policy of the University of Toronto to arrange reasonable accommodation of the needs of students who observe religious holy days other than those already accommodated by ordinary scheduling and statutory holidays. Students have a responsibility to alert members of the teaching staff at the beginning of the term to upcoming religious observances and anticipated absences. It is most important that no student be seriously disadvantaged because of their religious observances. However, in the scheduling of academic and other activities, it is also important to ensure that the accommodation of one group does not seriously disadvantage other groups within the University community. On an annual basis, the Office of the Vice-President and Provost publishes information concerning the anticipated dates of a number of holy days over the subsequent two academic years. The Office of the Vice Provost, Students & First-Entry Divisions has published guidelines found at <https://governingcouncil.utoronto.ca/secretariat/policies/religious-observances-policy-scheduling-classes-and-examinations-and-other>.

### **RE-GRADING POLICY**

**Term Work worth < 20% of the final grade:** A student who believes that their term work has been unfairly marked must make any inquiries about the mark on a graded piece of work **within one month of the return date** of the work. Regrade requests for term work worth less than 20% of the final mark may be submitted to the person who marked the work for re-evaluation. The student must submit: (1) the original piece of work; and (2) a written explanation detailing why they believe the work was unfairly/incorrectly marked. If a remarking is granted by an instructor, the student must accept the resulting mark as the new mark, whether it goes up or down or remains the same.

### **Term Work worth $\geq$ 20%**

Only term work worth at least 20% of the course mark may be appealed beyond the instructor. Such appeals must first follow the same guidelines as those mentioned directly above for work worth less than 20%. Again, the student must accept that the mark resulting from the appeal may be higher or lower or the same as the original mark. For more information about the appeals process refer to <https://www.utm.utoronto.ca/iccit/students/policies-procedures/re-marking-pieces-term-work>

### **ACADEMIC INTEGRITY**

Academic integrity is essential to the pursuit of learning and scholarship in a university, and to ensuring that a degree from the University of Toronto is a strong signal of each student's individual academic achievement. As a result, the University treats cases of cheating and plagiarism very

seriously. The [University of Toronto's Code of Behaviour on Academic Matters](#) outlines the behaviours that constitute academic dishonesty and the processes for addressing academic offences. Potential offences include, but are not limited to:

*In papers and assignments:*

- Using someone else's ideas or words without appropriate acknowledgement.
- Submitting your own work in more than one course without the permission of the instructor.
- Making up sources or facts.
- Obtaining or providing unauthorized assistance on any assignment.

*On tests and exams:*

- Using or possessing unauthorized aids.
- Looking at someone else's answers during an exam or test.
- Misrepresenting your identity.

*In academic work:*

- Falsifying institutional documents or grades.
- Falsifying or altering any documentation required by the University, including (but not limited to) doctor's notes.

All suspected cases of academic dishonesty will be investigated following procedures outlined in the Code of Behaviour on Academic Matters. If you have questions or concerns about what constitutes appropriate academic behaviour or appropriate research and citation methods, you are expected to seek out additional information on academic integrity from your instructor or from other [institutional resources](#).

It is your responsibility to understand the [Code of Student Conduct](#) and the [Code of Behaviour on Academic Matters](#). These can be found on the UTM website (Registrar > Academic Calendar > Codes and Policies)

**Plagiarism:** It shall be an offence for a student knowingly:

(a) to forge or in any other way alter or falsify any document or evidence required by the University, or to utter, circulate or make use of any such forged, altered or falsified document, whether the record be in print or electronic form;

(b) to use or possess an unauthorized aid or aids or obtain unauthorized assistance in any academic examination or term test or in connection with any other form of academic work;

(c) to personate another person, or to have another person personate, at any academic examination or term test or in connection with any other form of academic work;

(d) to represent as one's own any idea or expression of an idea or work of another in any academic examination or term test or in connection with any other form of academic work, i.e. to commit plagiarism (for a more detailed account of plagiarism, see Appendix "A")

(e) to submit, without the knowledge and approval of the instructor to whom it is submitted, any academic work for which credit has previously been obtained or is being sought in another course or program of study in the University or elsewhere;

(f) to submit any academic work containing a purported statement of fact or reference to a source which has been concocted.

(Code of Behaviour on Academic Matters)