

Individual Project Study Contract

(ENGN4200)

SECTION A (Students and Supervisors)

UniID:	<u>U5625456</u>	Contact Phone #:	<u>0451970119</u>
SURNAME:	<u>ZHENZHEN</u>	FIRST NAMES:	<u>LIU</u>
Primary Supervisor:	<u>Gerard Borg</u>		
Second Supervisor/Examiner:	_____		
COURSE CODE, TITLE AND UNIT:	<u>ENGN4200 S1</u>		

SEMESTER YOU PLAN TO COMMENCE YOUR PROJECT ☒ S1 ☐ S2 YEAR: 2018

PROJECT TITLE:

A DPS Based Transceiver For Wireless Communications at Low VHF.

PROJECT AND LEARNING OBJECTIVES/DELIVERABLES (A short description of the project objectives to achieve):

- Learn how an IQ modulator works
- Learn how to program synced signals in C.

PROJECT DESCRIPTION:

- The aim of this project is to develop a low cost 70MHz radio transmitter based on the AD9854 Direct Digital Synthesiser and the raspberry PI. The AD9854 Direct Digital Synthesiser is to be programmed in the C language so that:

- a) The transmission of samples is uniform in the time and
- b) the RF signal $I(t)\cos(\omega t) + Q(t)\sin(\omega t)$

where $\omega = 2\pi f_c$, I/Q are the real and imaginary parts of signal constellation.

- For signal reception, a Version 3 RTL-SDR USB radio receive dongle is used, which samples a radio frequency signal between 50MHz and 1700 MHz, and outputs interleaved 8 bit I/Q samples at a symbol rate up to 2.4 Msps.

SECTION B (Project Deliverable Deadlines)

Key Deadlines for Project Starting in S1 2018: Please Refer to the Course Outline or Wattle page.

Item	New Students: S1 and S2 2018 (normal load)	New students: S1 2018 (double load)	Existing Students: S2 2017 into S1 2018
Project Registration	09/03/2018 5pm	09/03/2018 5pm	11/08/2017 5pm
Context Document	30/03/2018 5pm	30/03/2018 5pm	18/08/2017 5pm
Midterm Submission	25/05/2018 5pm	30/03/2018 5pm	27/10/2017 5pm
Poster Presentation	Week 12, S2 2018 (Monday 22/10/2018)	Week 12, S1 2018 (Monday 21/05/2018)	Week 12, S1 2018 (Monday 21/05/2018)
Thesis Submission	Week 12, S2, 26/10/2018	25/05/2018 5pm	25/05/2018 5pm

SECTION C (Responsibilities)

Primary Supervisors:

- Have a duty of care to the student and must ensure projects are scoped appropriately.
- Must establish regular (weekly or fortnightly) progress meetings with your student, which are agreed in writing (email is sufficient).
- Must maintain regular contact with the student. If a student under your supervision is unresponsive and/or does not attend 2 scheduled meetings in a row without prior explanation, the Supervisor must:
 - o Notify the student in writing that they are at risk of breaching their Individual Project Study Contact agreement and provide a deadline for response; and
 - o Contact the Course Convenor and CECS Student Services so a record can be made.
- Must provide regular feedback, assistance and guidance to students and ensure that the student has access to resources required to complete their project.
- Must advise the student, the Secondary Supervisor and the Course Convenor immediately if you are unable to continue supervision and/or if you planning travel for longer than 2 weeks and/or which could reasonably be expected to impact on your ability to supervise the student.
- Must collate all feedback and assessment marks for project deliverables from the Secondary Supervisor and provide final assessment marks to the Course Convenor in accordance with CECS result approval deadlines.
- Must communicate any known issues or concerns relating to the student's progress or welfare to the Course Convenor.
- Must attend the poster presentation

- Nominate the second supervisor / examiner – can be in discussion with student.

Secondary supervisors:

- Have a duty of care to the student
- Must liaise regularly with the Primary Supervisor regarding feedback of project deliverables and marking of assessment items.
- Must submit all assessment marks and feedback to the Primary Supervisor in accordance with CECS result approval deadlines.
- Must advise the student and the Primary Supervisor immediately if you are unable to continue in your role as secondary supervision and/or if you planning travel for longer than 2 weeks and/or which could reasonably be expected to impact on your ability to supervise the student and/or provide assessment marks.
- Must report any concerns which could be considered significant (e.g. harassment/bullying, Primary Supervisor becomes unresponsive) in relation to the student and/or their supervision directly to the Course Convenor.

Students:

- Must adhere to the deliverable deadlines set out in this agreement
- Must comply with the University's policies and procedures in terms of applying for assessment item/deliverable extensions and/or deferred assessments.
- Must attend all scheduled meetings with your Primary and/or Secondary Supervisor, as per your written agreement. If you are unable to attend a scheduled meeting, you will (where practicable) provide your supervisor with prior notice of your unavailability to attend.
- Must understand and exercise the Academic Integrity requirements of the ANU.
- Must provide regular feedback on your progress to your Primary Supervisor and report any challenges which could impact your ability to successfully complete your project (e.g. Health concern).
- Must report any concerns which could be considered significant (e.g. harassment/bullying, Primary Supervisor becomes unresponsive) directly to the Course Convenor.

Course Coordinator:

- Must communicate program and course expectations and requirements to students and supervisors
- Coordinate the deadline for submission of interim and/or final assessment results and feedback in accordance with CECS results approval deadlines.
- Must maintain the course Wattle site.
- Must organise poster presentations.
- Must assist with conflict/problem resolution.
- Must consider extensions up to three weeks to assignment deadlines (with input/endorsement from Primary/Secondary Supervisors).

SECTION D (Declarations)**STUDENT DECLARATION:**

1. I certify that the information I have given in this contract is complete, accurate and truthful.
2. I have read and understood the obligations that apply to me as the student, as well as the requirements of my Supervisors and the Course Convenor.
3. I agree to fulfil the obligations of this contract.

.....
Signature

05/03/2018
.....
Date

PRIMARY SUPERVISOR DECLARATION:

1. I certify that the information I have given in this contract is complete, accurate and truthful.
2. I have read and understood the obligations that apply to me as the Primary Supervisor, as well as the requirements of the Student, the Secondary Supervisor and the Course Convenor.
3. I have reviewed the aforementioned student's academic transcript and assess this student to be suitable to complete the project detailed above.
4. I agree to provide supervision and support to the aforementioned student for the duration of the project.
5. I agree to fulfil the obligations of this contract.

.....
Signature

5/3/2018
.....
Date

SECONDARY SUPERVISOR DECLARATION:

1. I certify that the information I have given in this contract is complete, accurate and truthful.
2. I have read and understood the obligations that apply to me as the Secondary Supervisor, as well as the requirements of the Student, the Primary Supervisor and the Course Convenor.
3. I have reviewed the aforementioned student's academic transcript and assess this student to be suitable to complete the project detailed above.
4. I agree to provide co-supervision and support to the aforementioned student for the duration of the project.
5. I agree to fulfil the obligations of this contract.

.....
Signature

.....
Date

SECTION E (Course Convenor Approval)

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Signature

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Date