



ROMBLON STATE UNIVERSITY
College of Engineering and Technology
 Department of Electrical Engineering
COURSE SYLLABUS

RES 512 – RESEARCH PROJECT 2
1st Semester SY 2020-2021

RSU VISION

Romblon State University as a premier institution of higher education in the MIMAROPA region for a globally competitive Province of Romblon.

RSU MISSION

The Romblon State University is committed to:

- 1) provide advanced education, higher technological and professional instruction;
- 2) provide training in agriculture and fishery, for science and technology, education, arts, agriculture, and other relevant fields of study;
- 3) undertake research and extension services; and
- 4) provide progressive leadership in its areas of specialization.

PROGRAM EDUCATIONAL OBJECTIVES (PEO)

The Electrical Engineering Program Educational Objectives and Relationship to RSU Mission:

Graduates of the Electrical Engineering program are expected to attain or achieve the following Program Educational Objectives 3 - 5 years of graduation:	MISSION			
	1	2	3	4
1) Attain technical and managerial skills in planning, design, construction, operation, management and maintenance of the built environment and global infrastructures and utilizing their skills to analyze and design systems, specify project methods and materials.	√	√	√	√
2) Establish a technical expertise and become a total engineer utilizing his knowledge in arts, sciences and communication skills in oral, written, visual and graphic modes when working as a team members or leaders, so they can actively participate in their communities and their profession.	√	√	√	√
3) Establish an understanding of professionalism, ethics quality performance, public policy, safety, and sustainability that allows them to be professional leaders and contributors to society when solving engineering problems and producing electrical engineering solutions through research and development.			√	√
4) Initiate an active program of life-long learning, including studies leading to professional licensure or an advanced degree in engineering that provides for continued development of their technical abilities and management skills and attainment of professional expertise.			√	√

COURSE INFORMATION:

Course Code: RES 512
 Course Title: Electrical Engineering Research Project



Course Description: This course covers the basic stages and processes to undertake a research study, particularly towards the actual conduct of the study and writing-up of the research project report or thesis. It includes the finalization of the main parts or contents of the thesis: Chapter 1: Introduction, Chapter 2: Review of Related Literature, Chapter 3: Methodology, Chapter 4: Results and Discussion, and Chapter 5: Summary, Conclusions and Recommendations.

Credit Units 1 unit
Lecture hours 1
Laboratory hours 0
Pre-requisite RES421 and 100% 5th year standing

STUDENTS OUTCOMES (SO)

Upon completion of the program, the Romblon State University Electrical Engineering students will demonstrate:	PEO			
	1	2	3	4
1. An ability to apply knowledge of mathematics, physical sciences, engineering sciences to the practice of electrical engineering.	√	√	√	√
2. An ability to design and conduct experiments, as well as to analyze and interpret data.	√	√	√	
3. An ability to design, builds, improve, and install systems or processes which meet desired needs within realistic constraints.	√	√	√	√
4. An ability to work effectively in multi-disciplinary and multi-cultural teams.			√	√
5. An ability to recognize, formulate, and solve electrical engineering problems.	√	√	√	
6. An understanding of the effects and impact of electrical engineering projects on nature and society, and of the civil engineers' social and ethical responsibilities.	√	√	√	√
7. Specialized engineering knowledge in each applicable field, and the ability to apply such knowledge to provide solutions to actual problems.	√	√	√	√
8. An ability to effectively communicate orally and in writing using the English language.	√	√	√	√
9. An ability to engage in life-long learning and an acceptance of the need to keep current of the development in the specific field of specialization.			√	√
10. An ability to use the appropriate techniques, skills and modern engineering tools necessary for the practice of electrical engineering.	√	√	√	
11. Knowledge of contemporary issues.			√	√

Course Outcomes (Co) For Electrical Engineering Research Project (Subject) in relation to Student Outcomes

Course Outcomes(COs) : At the end of the course, the student will be able to:		Student Outcomes										
		a	b	c	d	e	f	g	h	i	j	k
CO-1	Conduct the research study following the basic components of the research process		D	D	D		D	D	D		E	
CO-2	Explain the results and findings, including the summary, conclusions and recommendations of the research conducted								D			
CO-3	Write and submit a complete manuscript of the thesis which contains the Chapter 1: Introduction, Chapter 2: Review of Related Literature and Studies, Chapter 3: Methodology,								D			



Chapter 4: Results and Discussion, and Chapter 5: Summary, Conclusions, and Recommendations																			
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Note: I - An introductory course to an Outcome
E - Enabling

LEARNING PLAN

Week	Topic	Satisfied CO	Teaching-Learning Activities	Assessment Technique
1	<p>PART 1: ONLINE COLLEGE ORIENTATION Via CET Facebook Page</p> <p>Online Course Orientation via GOOGLE Classroom/Meet-up, WEEBLY and ARAL System (while CANVAS and MOODLE are optional platform) concerning course syllabus/contents, class policies and requirements on the online learning modalities</p>		<p>Introduction Multi-media presentation Familiarization of the primary online learning platforms:</p> <p>www.rsucivilengineering.weebly.com</p> <p>https://classroom.google.com/u/3/c/MTU1NjcwMTlwMTcx Class code: az7e6b4</p> <p>www.aral.cloud.8000</p> <p>https://rsu2020.moodlecloud.com/</p> <p>Handouts and other instructional/reading materials will be uploaded in the website on a weekly basis.</p>	
	<p>INTRODUCTION: THE IMPORTANCE OF RESEARCH “Why we conduct Research?””</p>	CO-1	<p>Handouts and other instructional/reading materials will be uploaded in the website on a weekly basis.</p> <p>Video presentations via Youtube will be uploaded in the websites</p> <p>Hardcopies might be available upon request of the students</p> <p>Online Discussion Forum</p>	Reaction Paper Homework/ Assignment
2	<p>RESEARCH PROCESS: A REVIEW Components of the Research Process, including Research Problem and Objectives; Review In the Conduct of Related Literature and Studies, Methodology: Materials and Methods</p>	CO-1	<p>Handouts and other instructional/reading materials will be uploaded in the website on a weekly basis.</p> <p>Video presentations via Youtube will be uploaded in the websites</p> <p>Hardcopies might be available upon request of the students</p>	Reaction Paper Homework/ Assignment



			Online Discussion Forum	
3	WRITING-UP OF RESEARCH PROPOSAL Guidelines in the Revision of Chapters 1, 2, and 3	CO-1	Online Consultation/Google Meet in the progress of the conduct of the study Online Discussion Forum	Homework/ Assignment- Group Work Progress Report
4	TITLE DEFENSE VIA GOOGLE MEET-UP			
5	Guidelines in Writing-Up of Chapters 4 and 5	CO-2	Online Consultation/Google Meet in the progress of the conduct of the study Online Discussion Forum	Homework/ Assignment- Group Work Progress Report
6-9	CONDUCT OF THE RESEARCH STUDY			
9	MIDTERM EXAMINATION SUBMISSION OF PROGRESS REPORT			
10-15	CONDUCT OF THE RESEARCH STUDY (CONTINUATION)			
15	SUBMISSION OF THE FIRST DRAFT OF THE RESEARCH STUDY REPORT			
16	Finalization of Chapters 1, 2, 3, 4 and 5	CO-2 CO-3	Online Consultation/Google Meet in the progress of the conduct of the study Online Discussion Forum	Homework/ Assignment- Group Work Progress Report
17	FINALIZATION OF THE RESEARCH STUDY REPORT			
18	FINAL EXAMINATION ORAL FINAL DEFENSE VIA GOOGLE MEET-UP OR F2F (OPTIONAL)			
19	SUBMISSION OF FINAL MANUSCRIPT OF THESIS (FOUR HARD-BOUND COPIES)			

COURSE REQUIREMENTS

1. Online Attendance/Login
2. Online Class participation thru Discussion Forum
3. Online Homework/Assignments
4. Online Quizzes/Major Examination
5. Progress Reports via Google Meet
6. Group Work Final via Google Meet

COURSE POLICIES

- Online login/participation is necessary for each student to obtain maximum benefits for instruction. It is expected that the students regularly visit the websites (Weebly, Google Classroom, ARAL; and Canvas or Moodle are optional platforms); and active participation in the online discussion/forums



will be monitored regularly. Observe proper online etiquette (politeness) in posting messages in the discussion forums.

- Projects and online homework/assignments must be submitted on time. Point deduction will apply to late submission of individual projects and homework/assignments.
- Online quizzes will be given on a specified time and to be announced ahead of time. Make-up online quizzes will be given only for those who have valid reasons of missing the quizzes/examinations.
- Online major examinations (Mid-term and Final) are optional and to be announced ahead of time. Make-up online examinations will be given depending on the availability of the students. It might be given on-site or face-face provided that necessary arrangements will be made.
- **Students are required to have a notebook for the subject.** It is expected that all students will take notes during class and will study these notes. Handouts should be downloaded or photocopied. Assignments will be handwritten in the notebook and images/photos of these assignments will be submitted electronically via Google Classroom or ARAL system.
- No sharing of homework/assignments electronically or any means of copying others outputs.
- Personal laptops, cell phones and other electronic gadgets are strongly encouraged to use for the online learning. Visit to computer shops are still acceptable but maintain social distancing and wearing ng face masks/shields.
- Face-to-face group studying and peer teaching are also encouraged to enhance the knowledge and skills but proper protocols such as social distancing and wearing of face masks and shields will be strictly observed.
- Any form of online cheating will not be tolerated. Any violation will be dealt properly.
- **Plagiarism is not tolerated in the preparation of written reports, thus proper citation and referencing are necessary.**

STUDENTS WITH SPECIAL NEEDS

Students who have any disability that might affect their performance in the class are encouraged to speak with the instructor early in the semester.

COURSE GRADING SYSTEM

Grading will be as follows:

Online Attendance/Class Participation	20%
Homework/Assignment	10%
Quiz	5%
Group Work/Output	40%
Midterm and Final Examinations	25%

Methods of Computation

Absolute zero shall be used in all examinations and quizzes.

Percentile shall be used in recording grades when evaluating students using the formula below.



$$\text{Final Grade} = \frac{\text{Midterm Grade} + \text{Final Term Grade}}{2}$$

Grades Equivalent

Rating	Grade
96 - 100	1.00
91 - 95	1.25
86 - 90	1.50
81 - 85	1.75
76 - 80	2.00
71 - 75	2.25
66 - 70	2.50
61 - 65	2.75
60	3.00
Conditional	4.00
Below 60	5.00

CONDITIONAL is not a grade. It is given to students that lacks necessary requirements and therefore, must be accomplished before the end of that semester to obtain a grade. INCOMPLETE (INC) is reflected in the university online grading/report system as a mark given to the students for major compliance in the subjects which requires a Completion Form from the Registrar to be filled-up and accomplished within a year, otherwise noncompliance is a final grade of 5.0. WITHDRAW (W) is also reflected in the grading/report to indicate that the student withdraw or did not finish/complete the subject enrolled.

LIST OF REQUIRED E-BOOKS

Dawson, C. (2009). *Introduction to Research Methods, A Practical Guide for Anyone Undertaking a Research Project*, 4th Edition, UK: How to Content. Retrieved from <https://www.pdfdrive.com/introduction-to-research-methods-a-practical-guide-for-anyone-undertaking-a-research-project-e157725135.html>

Vanderstoep, S. & Johnston, D. (2009). *Research Methods for Everyday Life: Blending Qualitative and Quantitative Approaches*, USA: Jossey-Bass. Retrieved from <https://www.pdfdrive.com/research-methods-for-everyday-life-blending-qualitative-and-quantitative-approaches-research-methods-for-the-social-sciences-e161070302.html>

Neuman, W. (2014). *Social Research Methods: Qualitative and Quantitative Approaches*, 7th Edition, UK: Pearson Education Limited. Retrieved from <https://www.pdfdrive.com/social-research-methods-qualitative-and-quantitative-approaches-e19744746.html>

Johnson, R. & Christensen, L (2014). *Educational Research: Quantitative, Qualitative, and Mixed Approaches*, USA: SAGE Publications, Inc. Retrieved from <https://ismailsunny.files.wordpress.com/2017/07/educational-research-quantitative-qualitative-and-mixed-approaches-r-robert-burke-johnson.pdf>

ADDITIONAL READING MATERIALS

Albert, J R (2008). *Basic Statistics for the Tertiary Level*, Padua, Patungan & Arquez (eds), Manila: Rex Book Store.

Asaad, A S (2008). *Statistics Made Simple for Researchers*, Manila: Rex Book Store.



Castillo, Fely S. (2007). *Research Education and Scientific Writing*, Latest Edition, Manila: Booklore Publishing Corporation.

Finkelsten, Leo Jr (2005). *Pocket Book of Technical Writing for Engineers and Scientists*, 2nd Edition, McGraw-Hill (Asia)

Fraenkel, Kack R., Wallen, Norman E., and Hyun, Helen H. (2013). *How to Design and Evaluate Research in Education*, 8th Edition, New York: McGraw-Hill International Edition.

Frankfort- Nachmias, Chava, and Nachmias, David (1997). *Research Methods in the Social Sciences*, 5th Edition, Arnold, London.

Fraenkel, Kack R., and Wallen, Norman E. (2010). *How to Design and Evaluate Research in Education*, 7th Edition, New York: McGraw-Hill International Edition.

Jha, A S (2011). *Research Methodology*, Delhi: APH Publishing Corporation.

Mustafa, A (2010). *Research Methodology*, India: AITBS Publishers.

Paler-Calmorin & L, Calmorin, M A (2007). *Research Methods and Thesis Writing*, 2nd edition, Manila: Rex Book Store.

Sanchez, C A (1997). *Methods Techniques of Research*, 3rd Edition, Manila: Rex Book Store.

INPUTS/REMARKS:

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