

NDDU VISION-MISSION STATEMENT

VISION

Notre Dame of Dadiangas University is a Catholic, Filipino Institution of Academic Excellence established by the Marist Brothers of the Schools (*F.M.S.- Fratres Maristae a Scholis*) characterized by St. Marcellin Champagnat's ideals of simplicity, humility and quiet zeal for God's work as inspired by the Blessed Virgin Mary. The school is dedicated to the formation of persons in all levels of learning, who, as **Christian Leaders, Competent Professionals, Community-Oriented Citizens and Culture-Sensitive Individuals** will actively participate in building a peaceful and progressive nation.

MISSION

As a **Catholic Educational Institution**, NDDU shares in the Church's mission of evangelization by integrating life and faith;

- As a **Filipino Institution**, NDDU seeks to preserve Filipino Culture and propagate love of country and its people;
- As an **Institution of Quality Education**, NDDU aims leadership in Curricular Programs, Multi-Disciplinary Programs, Research, and Community Service;
- As a **Marist Institution**, NDDU promotes the core values of Family Spirit, Marian Spirit, Simplicity, Presence, Preference for the Least Favored, Love of Work, and Integrity of Creation; and
- As a **Community-Oriented Institution**, NDDU aims to respond to the challenges of the locality it is serving: South Cotabato, Sultan Kudarat, Sarangani Province and, General Santos City (SOCSKSARGEN Area).

COLLEGE OBJECTIVES

The College of Engineering and Technology aims to:

1. Educate students to become Christian leaders, competent professionals, community oriented citizens, and culture sensitive individuals in order to contribute to the professional workforce in Engineering, Architecture, and Information Technology/
2. Serve the Engineering, Architecture, and Information Technology professions and the society through excellence in research and innovation that discovers new knowledge and enable new technologies and systems
3. Embrace a culture of service to the local, national, and international communities.
4. Equip students with employable skills along with a sense of social, moral and environmental responsibility.
5. Produce graduates highly specialized in civil, electrical, electronics, industrial, and computer engineering, information technology and Architecture that have a strong foundation in the basic physical, behavioral and social sciences and holistically consider the economic, social and environmental relevance to projects undertaken.

For more information, please see
The University Registrar or
Call (083) 552 4444 local 2211,
or visit us at
www.nddu.edu.ph

COURSES OFFERED

Notre Dame of Dadiangas University started operating its high school department in 1953. In 1959 the school offered the following courses: Liberal Arts, Commerce and one (1) year Secretarial course. However, NDDU endeavors to keep up with the demands of the times and with the modern trends in education, as well as to contribute to the manpower building of the General Santos community and of the country. To attain these, it now offers more programs relevant to the needs of the country. The following are the programs:

I. POST GRADUATE

- Doctor in Management (DM) major in Human Resource Management
- Doctor of Philosophy in Education (Ph.D.Ed.)
- Doctor of Philosophy in Language Education (Ph.D.LE)
- Doctor of Philosophy in Science Education (Ph.D.Sci.Ed.) Major in Biology

II. GRADUATE with Accreditation Level

- Master in Business Administration (MBA) (Thesis & Non-Thesis) Level II
- Master in Public Administration (MPA) (Thesis & Non-Thesis) Level II
- Master of Arts in Education (MAEd) Level II

Areas of Specialization:

- Mathematics, Guidance & Counseling,
- Teaching English as a Second Language, Educational Management,
- Science Education, Religious Education and Early Childhood Education
- Master in Engineering Program Major in Civil Engineering
- Master of Arts in Nursing (MAN)

III. UNDERGRADUATE with Accreditation Level

Five Year Courses

- Bachelor of Science in Architecture (BSArch)
- Bachelor of Science in Pharmacy (BSPharma)

Four Year Courses

- Bachelor of Science in Civil Engineering (BSCE) Level II
- Bachelor of Science in Computer Engineering (BSCpE)
- Bachelor of Science in Electrical Engineering (BSEE) Level I
- Bachelor of Science in Electronics and Communications Engineering (BSECE)
- Bachelor of Science in Industrial Engineering (BSIE) Level II
- Bachelor of Arts (AB) Level IV
- Major in:* Political Science, English, Communication, and Psychology
- Bachelor of Science in Biology (BSBio)
- Bachelor of Science in Mathematics (BSM)
- Bachelor of Science in Accountancy (BSA) Level II
- Bachelor of Science in Business Administration (BSBA) Level IV
- Major in:* Business Economics, Financial Management, Marketing Management, Human Resource Management
- Bachelor of Science in Entrepreneurship (BSEn)
- Bachelor of Science in Hospitality Management (BSHM)
- Bachelor of Science in Internal Auditing (BSIA)
- Bachelor of Science in Management Accounting (BSMA)
- Bachelor of Science in Tourism Management (BSTM)
- Bachelor of Early Childhood Education (BECEd) Level IV
- Bachelor of Elementary Education (BEEd) Level IV
- Bachelor of Secondary Education (BSEd) Level IV
- Major in:* English, Science, Mathematics, Religious Education
- Bachelor of Physical Education (BPEd)
- Bachelor of Special Needs Education Major in Elementary School Teaching (BSNEd)
- Bachelor of Science in Computer Science (BSCS) Level II
- Bachelor of Science in Entertainment and Multimedia Computing (BSEMC)
- Bachelor of Science in Environmental Planning (BSEP)
- Bachelor of Science in Information Technology (BSIT) Level II
- Bachelor of Library & Information Science (BLIS)
- Bachelor of Science in Medical Technology (BSMT)
- Bachelor of Science in Nursing (BSN) Level III

College of Engineering and Technology NOTRE DAME OF DADIANGAS UNIVERSITY

Marist Avenue, General Santos City



Course Catalogue

BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING (Government Recognition No.031 series of 2011)

Effective SY 2018 – 2019

Student's Signature	
Student's Name	
Contact Number	
Email Address	

**THE FIVE-YEAR CURRICULUM LEADING TO THE DEGREE
BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING**

Per CHED Memorandum Order (CMO) No. 88 series of 2017

Effective SY 2018 – 2019*

COURSE DESCRIPTION:

Electrical Engineering is a professional Engineering Discipline that deals with the conceptualization, development, design and application of safe, healthy, ethical, economical and sustainable generation, transmission, distribution and utilization of electrical energy for the benefit of society and the environment through the knowledge of mathematics, physical sciences, information technology and other allied sciences, gained by study, research and practice.

Program Educational Objectives

At the end of the degree program, the students should :

- be employed and promoted as engineers in construction, industry, government, academe, or in other related profession.
- maintain state-of-the-art knowledge through lifelong learning, such as graduate study, and continuing education.
- have developed consciousness of the ethical, legal and social responsibility of Electrical engineers and of the environmental effects of Electrical engineering projects to the community by responding to the changing impact of Electrical engineering solutions in local and global context.
- support the Electrical engineering profession through participation in professional societies, civic groups, and educational institutions.
- exhibit strong communication, interpersonal, and resource-management skills as leaders in the Electrical engineering profession
- imbibe in themselves the Christian values anchored on the ideals of St. Marcellin Champagnat by maintaining high standards of professional and ethical responsibility.

Program outcomes:

- apply the basic mathematical and scientific concepts that underlie the modern field of Electrical Engineering
- collect and analyze relevant data from experiments or research for the purpose of developing an engineering decision, design, or layout.
- design a complex system or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability and sustainability.
- work effectively and productively with others as a part of a multidisciplinary team
- solve well-defined engineering problems in the different technical areas of Electrical engineering
- determine the global, economic, environmental, and societal impacts of a specific relatively constrained engineering solution
- analyze a complex situation involving multiple conflicting professional and ethical interests, to determine appropriate course of action
- organize and deliver effective verbal, written, and graphical communication.
- demonstrate the 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.
- apply appropriate techniques skills, core principles of Electrical Engineering in engineering practice
- maintain an awareness of contemporary issues and contribute to the well-being of their communities.
- Integrate Christian values anchored on the ideals of St. Marcellin Champagnat as they carry out the professional and ethical responsibilities of the Electrical Engineering profession

- EE Students are required to maintain a minimum final grade of 2.75 in all Technical courses, and a Grade point average (GPA) of 2.50 in order to be retained in the BSEE program.
- Technical courses include: Mathematics, Natural Physical Sciences (NPS), Basic Engineering Sciences (BES), Engineering Allied courses (EAC), Professional courses (PC)
- Students shall be responsible to write their official grades on the space provided.
- Student shall always make this document available for evaluation purposes, especially during enrolment.
- For Non-Catholics, RE 114 and RE 115 could be replaced with RE 40 and RE 30 respectively.
- NSTP 1, NSTP 2, PGS 1 and PGS 2 must be taken during the First Year.
- 3rd year standing – must have completed all first year to second year subjects
- 4th year standing – must have completed all first year to third year subjects.

FIRST YEAR – FIRST SEMESTER						
Grade	Cat. #	Descriptive Title	# of Hrs/Wk		Units	Pre-Req
			Lec	Lab		
	RE 111	Salvation Hist. Old Testament	3	0	3	
	GE 3	Mathematics in the Modern World	3	0	3	
	GE 5	Purposive Communication	3	0	3	
	GE 10	KontekstwalisadongKomunikasyonsa Filipino	3	0	3	
	MATH 115	Differential Calculus	5	0	5	
	CHEM 113	Chemistry for Engineers (Lec)	3	0	3	
	CHEM 114	Chemistry for Engineers (Lab)	0	3	1	
	BES 113	Electrical Engineering Orientation	2	0	2	
	PE 1	Physical fitness & self-testing activities	2	0	2	
	PGS 1	Personal Growth Session 1	3	0	0	
	Total		27	3	25	
FIRST YEAR – SECOND SEMESTER						
	RE 112	Christology	3	0	3	RE 111
	GE 1	Understanding the self	3	0	3	
	GE 13	Sosyedad at literatura/panitikangpanlipunan	3	0	3	
	Math 220	Integral Calculus	5	0	5	Math 115
	PHYS 212	Physics for Engineers – lec (NPS)	3	0	3	Math 115,
	PHYS 213	Physics for Engineers – lab (NPS)	0	3	1	Math220(co-req)
	BES 120	Computer Aided Drafting	0	3	1	
	BES 121	Computer Fundamentals & Programming 1	0	3	1	
	PE 2	Rhythmic Activities	2	0	2	PE 1
	PGS 2	Personal Growth Session 2	3	0	0	
	Total		22	9	22	
FIRST YEAR – SUMMER						
	NSTP 1	Nat'l Service Training Prog 1	3	0	3	
	NSTP2	Nat'l Service Training Prog 2	3	0	3	
	Total		6	0	6	
SECOND YEAR – FIRST SEMESTER						
	RE 113	Christian Faith	3	0	3	RE 112
	GE 2	Readings in Philippine History	3	0	3	
	GE 7	Art Appreciation	3	0	3	
	MATH 200	Engineering Data Analysis	3	0	3	Math 115
	MATH 226	Differential Equations	3	0	3	Math 220
	BES 210	Statics of Rigid Bodies (Engineering Mech)	3	0	3	M 220Ph 212, 213
	EE-PC 210	Electrical Circuits 1	3	3	4	M 220Ph 212, 213
	PE 3	Recreational activities(individual &dual sports)	2	0	2	PE 1
	Total		23	3	24	
SECOND YEAR – SECOND SEMESTER						
	RE 114	The Church	3	0	3	RE 113
	GE 11	Filipino saiba'tbangdisiplina	3	0	3	
	MATH 319A	Engineering Math for EE	3	0	3	Math 226
	BES 223	Engineering Economy	3	0	3	Math 200
	EAC 220	Fundamentals of Deformable Bodies	2	0	2	BES 210
	EAC 221	Electronic Circuits: Devices and Analysis	3	3	4	EE-PC 210
	EAC 222	Electromagnetics	2	0	2	M 226,Ph 212, 213
	EE-PC 220	Electrical Circuits 2	3	3	4	EE-PC 210
	PE 4	Team Sports	2	0	2	PE 1
	Total		24	6	26	

Prepared By: **ENGR. SHIELA A. SORIÑO, MEE**
Dean, College of Engineering & Technology

DR. JOSE DAGOC, JR., RN
Vice President for Academics

Noted By: **ENGR. JHAN JKEM B. FONTANILLA, MSCE**
Supervising Education Program Specialist

DR. MAXIMO C. ALJIBE, CESO III
Director IV, CHED Regional Office

THIRD YEAR – FIRST SEMESTER						
Grade	Cat. #	Descriptive Title	# of Hrs/Wk		Units	Pre-Req
			Lec	Lab		
	RE 115	Liturgy and Sacraments	3	0	3	RE 114
	GE 8	Ethics	3	0	3	
	EAC 310	Fluid Mechanics	2	0	2	Phys 212/213
	EAC 311	Fundamentals of Electronic Communication	3	0	3	EAC 221
	EAC 312	Logic Circuits & Switching Theory	2	0	2	EAC 221
	EAC 313	Industrial Electronics	3	3	4	EAC 221
	IE-PC 313	Basic Occupational Safety and Health	3	0	3	3 rd yr standing
	EE-PC 310	Numerical Methods and Analysis	2	3	3	MATH 319
	EE-PC 311	Electrical Machines 1	2	0	2	EAC 222 EE-PC 220
	Total		23	6	25	
THIRD YEAR – SECOND SEMESTER						
	RE 116	Christian Morality	3	0	3	RE 115
	BES 320	Technopreneurship 101	3	0	3	3 rd yr standing
	EAC 321	Basic Thermodynamics	2	0	2	M 220Ph 212, 213
	EAC 322	Microprocessor System	2	0	2	EAC 312
	EE-PC 320	Research Methods for EE	0	3	1	Math 200
	EE-PC 321	Electrical Machines 2	3	3	4	EE-PC 311
	EE-PC 322	Management of Engineering Projects	2	0	2	BES 223
	EE-PC 323	Feedback and Control Systems	2	0	2	Math 319,EAC221
	EE-PC 324	EE Law, Codes and Professional Ethics	2	0	2	GE 8
	EE-PC 325	Electrical Apparatus and Devices	2	3	3	EE-PC 220
	Total		21	9	24	
THIRD YEAR – SUMMER						
	EE 400	On the Job Training	2	3	31	4 th yr standing
	Total		2	3	3	
FOURTH YEAR – FIRST SEM SEMESTER						
	GE 9	Life and Work of Rizal	3	0	3	
	GE 6	Science, Technology & Society	3	0	3	
	EAC 410B	Environmental Science &Eng'g	2	0	2	
	EAC 412B	Materials Science &Engg	2	0	2	EAC 220, Ch13/114
	EE-PC 410	Capstone Design Project 1	0	3	1	EE-PC 325
	EE-PC 411	EE Correlation Course I	0	3	1	4 th yr standing
	EE-PC 412	Electrical Standards and Practices	0	3	1	EE-PC 324
	EE-PC-413	Electrical Systems and Illumination Engineering Design	3	6	5	EE-PC 321
	EE-PC-414	Instrumentation & Control	2	3	3	EE-PC 323
	EE-PC 415	EE Elective 1	3	0	3	4 th yr standing
	Total		18	18	24	
FOURTH YEAR – SECOND SEMESTER						
	GE 4	Contemporary World	3	0	3	
	EE-PC 420	Capstone Design Project	0	3	1	EE-PC-410
	EE-PC 421	EE Correlation Course II	0	6	2	EE-PC 411
	EE-PC 422	Seminars & Field Trips	0	3	1	4 th year standing
	EE-PC 423	Power System Analysis	3	3	4	EE-PC 412
	EE-PC 424	Fundamentals of Power Plant Engineering Design	0	3	1	coreq. EE-PC 423
	EE-PC 425	Distribution Systems and SubStation Design	2	3	3	coreq. EE-PC 423
	EE-PC 426	EE Elective 2	3	0	3	EE-PC 415
	Total		11	21	18	
	Overall Total		179	72	197	