

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.-FratresMaristae 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 (SOCKSARGEN Area).

COLLEGE OBJECTIVES

The College of Engineering and Technology aims to:

- 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/
- 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
- Embrace a culture of service to the local, national, and international communities.
- Equip students with employable skills along with a sense of social, moral and environmental responsibility.
- 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 CIVIL ENGINEERING (BSCE)

Effective SY 2018 – 2019

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

**THE FOUR-YEAR CURRICULUM LEADING TO THE DEGREE
BACHELOR OF SCIENCE IN CIVIL ENGINEERING (STRUCTURAL)**
Per CHED Memorandum Order (CMO) No. 92, Series of 2017
Effective SY 2018 – 2019*

COURSE DESCRIPTION:

Civil Engineering is a profession that applies the basic principles of Science in conjunction with mathematical and computational tools to solve problems associated with developing and sustaining civilized life. Civil Engineers are concerned with flood controls, landslides, air and water pollution and the design of facilities to withstand earthquakes and other natural hazards.

Program Educational Objectives

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

- be employed and promoted as civil 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 civil engineers and of the environmental effects of civil engineering projects to the community by responding to the changing impact of civil engineering solutions in local and global context.
- support the civil engineering profession through participation in professional societies, civic groups, and educational institutions.
- exhibit strong communication, interpersonal, and resource-management skills as leaders in the civil engineering profession
- imbibe in themselves the Christian values anchored on the ideals of St. MarcellinChampagnat by maintaining high standards of professional and ethical responsibility.

Program outcomes:

- apply the basic mathematical and scientific concepts that underlie the modern field of Civil 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 civil 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 Civil 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. MarcellinChampagnat as they carry out the professional and ethical responsibilities of the Civil Engineering profession

- CE 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 BSCE program.
- Technical courses include: Mathematics, Natural Physical Sciences (NPS), Basic Engineering Sciences (BES), 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		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 (NPS)	3	0	3
	CHEM 114	Chemistry for Engineers – lab (NPS)	0	3	1
	BES 110	Civil Engineering Orientation	2	0	2
	BES 114	Engineering Drawings & Plans	0	3	1
	PE 1	Physical fitness & self-testing activities	2	0	2
	PGS 1	Personal Growth Session 1	3	0	0
	Total		27	6	26

FIRST YEAR – SECOND SEMESTER					
	RE 112	Christology	3	0	3 RE 111
	GE 1	Understanding the self	3	0	3
	GE 11	Filipino saiba'tibangdisiplina	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,
	PHYS213	Physics for Engineers – lab (NPS)	0	3	1 Math220(co-req)
	BES 120	Computer-Aided Drafting	0	3	1 BES 114
	BES 121	Computer Fundamentals & Programming 1	0	3	1
	PE 2	Rhythmic Activities	2	0	2 PE1
	PGS 2	Personal Growth Session 2	3	0	0 PGS 1
	Total		25	9	25

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
	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	3	0	3 Math 220 Phys 212,213
	BES 211	Engineering Management	2	0	2 2rd yr standing
	BES 212	Computer Fundamentals & Programming 2	0	3	1 BES 121
	CE-PC 210	Fundamentals of Surveying	3	3	4 BES 114
	PE 3	Recreational activities(individual &dual sports)	2	0	2 PE1
	Total		22	6	24

SECOND YEAR – SECOND SEMESTER					
	RE 114	The Church	3	0	3 RE 113
	GE 4	Contemporary World	3	0	3
	BES 220	Engineering Geology	2	0	2 Chem. 113,114
	BES 221	Dynamics of Rigid Bodies	2	0	2 BES 210
	BES 222	Mechanics of Deformable Bodies	4	0	4 BES 210
	BES 223	Engineering Economy	3	0	3 2rd yr standing
	CE-PC 220	Construction Materials & Testing	2	3	3 BES 222 (Co-req)
	PE 4	Team sports	2	0	2 PE1
	Total		21	3	22

THIRD YEAR – FIRST SEMESTER					
Grade	Cat. #	Descriptive Title	# of Hrs/Wk		Units
			Lec	Lab	
	RE 115	Liturgy and Sacraments	3	0	3 RE 114
	GE 6	Science, Technology and Society	3	0	3
	MATH 201	Numerical Solutions to CE Problems	2	3	3 Math 226
	CE-AC 300	Engineering Utilities 1	3	0	3 Phys 213/213
	CE-AC 301	Engineering Utilities 2	3	0	3 Phys 212/213
	CE-PC 310	Fluid Mechanics	3	0	3 BES 222
	CE-PC 311	Structural Theory	3	3	4 BES 222
	CE-PC 312	Highway & Railroad Eng'g	3	0	3 CE-PC 210
	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
	CE-PC 320	Building Systems Design	2	3	3 BES 114
	CE-PC 321	Engineering Hydrology	2	0	2 3 rd yr standing
	CE-PC 322	Hydraulics	2	3	3 CE-PC 310
	CE-PC 323	Principles of Reinforced Concrete	3	3	4 CE-PC 311
	CE-PC 324	CE Laws, Contracts & Ethics	2	0	2 3 rd yr standing
	CE-PC 325	Principles of Steel Design	3	3	4 CE-PC 311
	Total		20	12	24

THIRD YEAR – SUMMER					
	CE-PC 400	Industry immersion (240 hours)	2	3	3
	Total		2	3	3

FOURTH YEAR – FIRST SEMESTER					
	GE 8	Ethics	3	0	3
	GE 9	Life & works of Rizal	3	0	3
	EAC 410B	Environmental Science &Eng'g	2	0	2
	CE-PC 410	CE Project. 1 (Thesis 1)	1	3	2 4th yr standing
	CE-PC 411	CE Correlation Course 1	0	3	1 4th yr standing
	CE-PC 412	Geotechnical Engineering 1 (Soil Mechanics)	3	3	4 BES 220/222
	CE-PC 413	Principles of Transportation Engineeringg	3	0	3 CE-PC 312
	CE-PC 414	Earthquake Engineering (Sp. co. 1)	2	3	3 4th yr standing
	CE-PC 415	Bridge Engineering (Sp. co. 2)	2	3	3 4th yr standing
	Total		19	15	24

FOURTH YEAR – SECOND SEMESTER					
	GE 7	(Hum) Art Appreciation	3	0	3
	CE-PC 420	CE Project 2 (Thesis 2)	1	3	2 CE-PC 410
	CE-PC 421	CE Correlation Course 2	0	6	2 CE-PC 411
	CE-PC 422	Quantity Surveying	1	3	2 CE-PC 320
	CE-PC 423	Computer Softwares in Structural Analysis (Sp. co. 3)	2	3	3 4th yr standing
	CE-PC 424	Structural Design of Towers and Other vertical structures(Sp. co. 4)	2	3	3 4th yr standing
	CE-PC 425	Foundation and Retaining Wall Design (Sp. co. 5)	2	3	3 4th yr standing
	CE-PC 426	Construction Methods &Project Management	3	0	3 CE-PC 422 (Co)
	Total		14	21	21
		Grand Total	179	81	200