

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:

- 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 profession 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

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:

POST GRADUATE

- Doctor in Management *major in Human Resource Management*
- Doctor of Philosophy in Education
- Doctor of Philosophy in Language Education
- Doctor of Philosophy in Science Education *major in Biology*

GRADUATE with Accreditation Level

- Master in Business Administration (Thesis & Non-Thesis) *PAASCU Level I*
- Master in Public Administration (Thesis & Non-Thesis) *PAASCU Level I*
- Master of Arts in Education *PAASCU Level I*
Major: *Mathematics, Teaching English as a Second Language*
Guidance and Counseling Early Childhood Education
Educational Management Science Education
Religious Education
- Master in Engineering Program *major in Civil Engineering*
- Master of Arts in Nursing

UNDERGRADUATE with Accreditation Level

Five Year Courses	
• BS Architecture	• BS Electrical Engineering
• BS Civil Engineering <i>PAASCU Level II</i>	• BS Electronics and Communications Eng'g
• BS Computer Engineering	• BS Industrial Engineering <i>PAASCU Level I</i>
Four Year Courses	
• BS Accountancy <i>PAASCU Level II</i>	• BS Accounting Technology <i>PAASCU Level II</i>
• Bachelor of Arts <i>PAASCU Level IV</i> Major: <i>Economics</i> <i>English</i> <i>Political Science,</i> <i>Psychology</i> <i>Communication</i>	• BS Business Administration <i>PAASCU Level IV</i> Major: <i>Business Economics</i> <i>Financial Management</i> <i>Marketing Management</i> <i>Management</i> <i>Management Accounting</i>
• BS Biology (BSBio) <i>PAASCU Level III</i>	• BS Tourism Management
• BS Hotel and Restaurant Management	• BS Computer Science (BSCS) <i>PAASCU Level II</i>
• Bachelor of Elem. Educ. <i>PAASCU Level IV</i> Major in: <i>General Education</i> <i>Pre-school Education</i> <i>Special Education</i>	• Bachelor of Secondary Education <i>Level IV</i> Major in: <i>English</i> <i>Biological Sciences</i> <i>Mathematics,</i> <i>Religious Education</i> <i>Music, Arts, PE and Health (MAPEH)</i>
• BS Entrepreneurship	• BS Environmental Science
• BS Information Technology <i>PAASCU Level I</i>	• BS Library & Information Science
• BS Mathematics <i>PAASCU Level IV</i>	• BS Medical Technology
• BS Nursing <i>PAASCU Level III</i>	• BS Office Administration <i>PAASCU Level IV</i>
• BS Pharmacy (BSPPharm)	

TWO YEAR COURSES

*Associate in Office Administration (AOA)

*Associate in Entrepreneurship (AEn)

K – 12 BASIC EDUCATION PROGRAM - ELEM(Level III); SECONDARY(Level II) - Lagao Campus

ALTERNATIVE SECONDARY EDUCATION – Lagao Campus

K – 12 BASIC EDUCATION PROGRAM - Espina Campus

NDDU TECHNICAL/VOCATIONAL COURSES - TESDA Accredited

MARIST TECHNICAL TRAINING PROGRAM (MTTP) - TESDA Accredited

College of Engineering and Technology NOTRE DAME OF DADIANGAS UNIVERSITY

Marist Avenue, General Santos City



Course Catalogue

BACHELOR OF SCIENCE IN COMPUTER SCIENCE

(Government Recognition No. 011 Series of 1998)

Effective SY 2018 – 2019

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

**THE FOUR-YEAR CURRICULUM LEADING TO THE DEGREE
BACHELOR OF SCIENCE IN COMPUTER SCIENCE**

Per CHED Memorandum Order (CMO) No. 25 Series of 2015

Effective SY 2018 – 2019

COURSE DESCRIPTION

Bachelor of Science in Computer Science program includes the study of computing concepts and theories, algorithmic foundations and new developments in computing. The program prepares students to design and create algorithms for solving computing problems.

The program also includes the study of the standards and practices in Software Engineering. It prepares students to acquire skills and disciplines required for designing, writing and modifying software components, modules and applications that comprise software solutions.

PROGRAM OUTCOMES

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

1. Apply knowledge of computing fundamentals, knowledge of a computing specialization, and mathematics, science, and domain knowledge appropriate for the computing specialization to the abstraction and conceptualization of computing models from defined problems and requirements;
2. Identify, analyze, formulate, research literature, and solve complex computing problems and requirements reaching substantiated conclusions using fundamental principles of mathematics, computing sciences, and relevant domain disciplines;
3. Acquired ability to apply mathematical foundations, algorithmic principles and computer science theory in the modeling and design of computer-based systems in a way that demonstrates comprehension of the trade-offs involved in design choices;
4. Acquired knowledge and understanding of information security issues in relation to the design, development and use of information systems;
5. Design and evaluate solutions for complex computing problems, and design and evaluate systems, components, or processes that meet specified needs with appropriate consideration for public health and safety, cultural, societal, and environment consideration;
6. Create, select, adapt and apply appropriate techniques, resources and modern computing tools to complex computing activities, with an understanding of the limitations to accomplish a common goal;
7. Function effectively as an individual and as a member or leader in diverse teams and in multidisciplinary settings;
8. Communicate effectively with the computing community and with society at large about complex computing activities by being able to comprehend and write effective reports, design documentation, make effective presentations, and give and understand clear instructions;
9. Acquire ability to recognize the legal, social, ethical and professional issues involved in the utilization of computer technology and be guided by the adoption of appropriate professional, ethical and legal practices;
10. Recognize the need, and have the ability, to engage in independent learning for continual development as a computing professional; and
11. Acquire and internalize Christian values of Honesty, Punctuality, and Family spirit, among others, anchored on the ideals of Saint Marcellin Champagnat and Mother Mary in the practice of Computer Science profession.

Reminders

- Student 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 2	Readings in Philippine History	3	0	3	
	GE 3	Mathematics in Modern World	3	0	3	
	GE 5	Purposive Communication	3	0	3	
	CCC 110	Introduction to Computing	3	0	3	
	CCC 111	Fundamentals of Programming	2	3	3	
	PE 1	Physical Fitness and Self-Testing Activities	2	0	2	
	PGS 1	Personal Growth Session 1	3	0	0	
	NSTP 1	National Service Training Program 1	3	0	3	
Total			25	3	23	

FIRST YEAR – SECOND SEMESTER

Grade	Cat. #	Descriptive Title	# of Hrs/Wk		Units	Pre-Req
			Lec	Lab		
	RE 112	Christology	3	0	3	RE 111
	GE 1	Understanding the Self	3	0	3	
	GE 10	Kontekstwalisadong Komunikasyon sa Filipino	3	0	3	
	CCC 120	Intermediate Programming	2	3	3	CCC 111
	CS-EPC 121	Discrete Structures 1	3	0	3	
	CS-EPC 122	Principles of Accounting	3	0	3	
	PE 2	Fundamental of Rhythmic Activities	2	0	2	PE 1
	PGS 2	Personal Growth Session 2	3	0	0	PGS 1
	NSTP 2	National Service Training Program 2	3	0	3	NSTP 1
Total			25	3	23	

SECOND YEAR – FIRST SEMESTER

Grade	Cat. #	Descriptive Title	# of Hrs/Wk		Units	Pre-Req
			Lec	Lab		
	RE 113	Christian Faith	3	0	3	RE 112
	GE 8	Ethics	3	0	3	
	GE 9	Life and Works of Rizal	3	0	3	
	CCC 210	Data Structures and Algorithms	2	3	3	CCC 120
	CCC 220	Information Management	2	3	3	CCC 120
	CS-EPC 211	Discrete Structures 2	3	0	3	CS-EPC 121
	PE 3	Recreational Activities (Individual and Dual Sports)	2	0	2	PE 2
Total			18	6	20	

SECOND YEAR – SECOND SEMESTER

Grade	Cat. #	Descriptive Title	# of Hrs/Wk		Units	Pre-Req
			Lec	Lab		
	RE 114	The Church	3	0	3	RE 113
	GE 4	Contemporary World	3	0	3	
	GE 11	Filipino sa Iba't-Ibang Disiplina	3	0	3	
	CS-EPC 221	Quantitative Methods (With Modeling and Simulation)	3	0	3	CS-EPC 211
	CS-EPC 222	Object-Oriented Programming	2	3	3	CCC 120
	CS-EPC 223	Algorithm and Complexity	3	0	3	CS-EPC 121, CCC 210
	PE 4	Team Sports	2	0	2	PE 3
Total			19	3	20	

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 7	Art Appreciation	3	0	3	
	GE 13	Sosyedad at Literatura/Panitikang Panlipunan	3	0	3	
	CS-EPC 310	Software Engineering 1	2	3	3	CCC 220, CS-EPC 222
	CS-EPC 311	Automata Theory and Formal Languages	3	0	3	CS-EPC 223
	CS-EPC 312	Architecture and Organization	3	0	3	CS-EPC 121, CCC 210
	CS-ITE 313	CS Elective 1	2	3	3	3rd year standing
Total			19	6	21	

THIRD YEAR – SECOND SEMESTER

Grade	Cat. #	Descriptive Title	# of Hrs/Wk		Units	Pre-Req
			Lec	Lab		
	RE 116	Christian Morality	3	0	3	RE 115
	CS-EPC 320	Software Engineering 2	2	3	3	CS-EPC 310
	CS-EPC 321	Information Assurance and Security	3	0	3	CCC 220
	CS-ITE 322	CS Elective 2	2	3	3	3rd year standing
	CS-EPC 323	Design and Implementation of Programming Languages	2	3	3	CCC 210
	CCC 324	Application Development and Emerging Technologies	3	0	3	CCC 220
Total			15	9	18	

THIRD YEAR – SUMMER

Grade	Cat. #	Descriptive Title	# of Hrs/Wk		Units	Pre-Req
			Lec	Lab		
	CS-EPC 410	Practicum	3	0	3	4th year standing
Total			3	0	3	

FOURTH YEAR – FIRST SEMESTER

Grade	Cat. #	Descriptive Title	# of Hrs/Wk		Units	Pre-Req
			Lec	Lab		
	GE 6	Science, Technology and Society	3	0	3	
	CS-EPC 411	Operating Systems	2	3	3	CCC 210
	CS-EPC 412	Social Issues and Professional Practices	3	0	3	CS-EPC 320
	CS-ITE 413	CS Elective 3	2	3	3	4th year standing
	CS-EPC 414	CS Thesis Writing 1	2	3	3	4th year standing
	CS-EPC 415	Human Computer Interaction	1	0	1	CCC 120
Total			13	9	16	

FOURTH YEAR – SECOND SEMESTER

Grade	Cat. #	Descriptive Title	# of Hrs/Wk		Units	Pre-Req
			Lec	Lab		
	CS-EPC 420	Network and Communication	2	3	3	CCC 120
	CS-EPC 421	CS Thesis Writing 2	2	3	3	CS-EPC 415
Total			4	6	6	

BSCS SUGGESTED ELECTIVES

Descriptive Title	# of Hrs/Wk		Units	Pre-Req
	Lec	Lab		
3D Modeling and Animation	3	0	3	
Computational Science	3	0	3	
Electronic Commerce	3	0	3	
Graphics and Visual Computing	3	0	3	
Intelligent Systems	3	0	3	
Machine Translation	3	0	3	
Mobile Application Development	3	0	3	
Multimedia Information Retrieval	3	0	3	
Parallel and Distributed Computing	3	0	3	
System Fundamentals	3	0	3	
Web Systems and Technologies	3	0	3	