

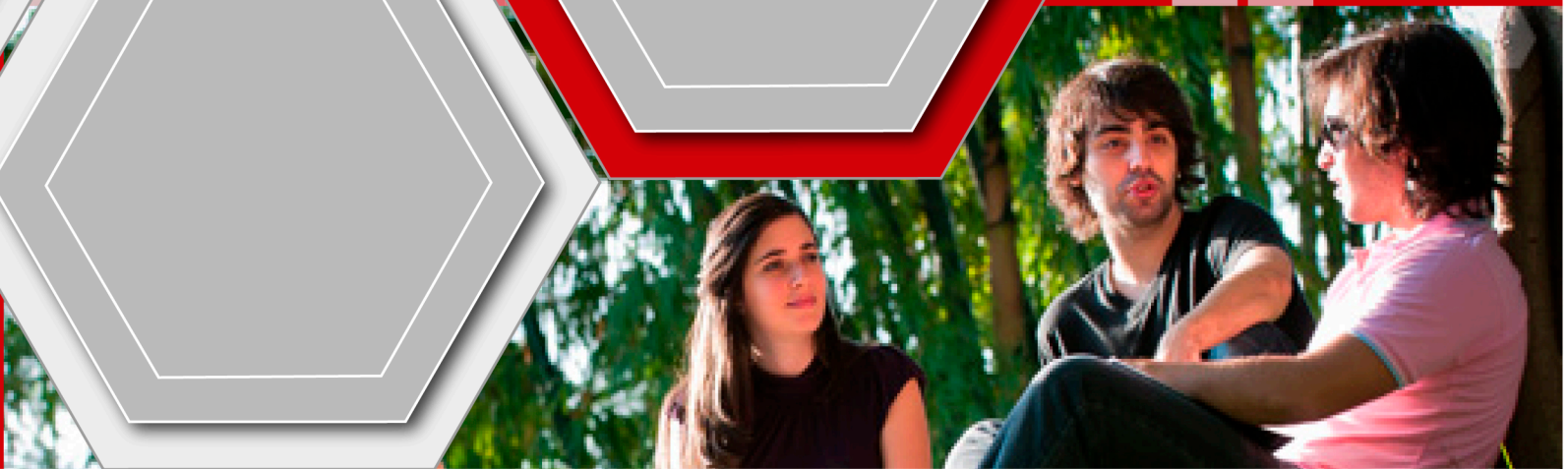
2013/14

ACADEMIC CATALOG

www.intec.edu.do



intec
INSTITUTO TECNOLÓGICO DE SANTO DOMINGO



PUBLISHED JULY 2013

Presentation

This Catalog is edited and published by Instituto Tecnológico de Santo Domingo (INTEC). Its purpose is to provide information about the Institute, and outline what it has to offer in terms of its courses and academic programs.

All information in this catalog is for the 2013-2014 academic year and it presents the official information-available at the catalog's publication date. INTEC reserves the right to change its course offerings, tuition, fees, and rules governing admission, requirements for graduation and granting degrees, and any other regulations affecting the students. Such changes will be published whenever the administration so determines its need, whether or not there is actual notice to individual students. Under no circumstances will modifications be applied retroactively.

The Catalog is published in English as well as Spanish. In the event that there should be a conflict of interpretation, the Spanish version will prevail above all others.

Index

ITEM	HEADING	PAGE(S)
1	PRESENTATION	3
2	INDEX	3-5
3	GENERAL INFORMATION	6-10
4	History	6
5	Institutional philosophy	6
6	Mission	6
7	Vision	7
8	Values	7
9	Objectives	7-8
10	Organization	6
11	Community	6
12	Campus	7
13	Academic Degrees	7
14	Rules & Regulations	8
15	Equal Opportunities	8
16	ADMISSIONS	8-14
17	Admissions Application	8
18	Admissions Requirements	8

ITEM	HEADING	PAGE(S)
19	Undergraduates	11-12
20	Dominican Nationals	11
21	International Students	12
22	Transfer Students	12
23	Foreign Student Transfers	12-13
24	Dominican Student Transfer	13
25	Transfer of Credit	13
26	Graduate, Specialty Courses and Masters Degrees	14
27	Dominican Residents	14
28	International Students	14
29	Document Acceptance and Verification	15
30	Academic Calendar	15
31	Admissions Tests	15
32	Admissions Committee	15
33	Enrollment	16
34	Student ID	16
35	Readmission	16
36	FIRST TIME STUDENTS	17
37	FACILITIES AND SERVICES	17
38	Community Health Center	17
39	Cafeteria	17
40	SPECIAL ACADEMIC FACILITIES	17-22
41	Red INTEC – (INTEC Network)	14-18
42	Virtual INTEC	18
43	Video-Conference suite	18
44	Audiovisuals	18
45	Library	19-20
46	Laboratories	20-21
47	STUDENT SERVICES	22
48	Family Discount Plan	22
49	Personal Accident Insurance Plan	22
50	International Student Health Plan	22
51	INTEC PROGRAM FOR OUTSTANDING STUDENTS, PIES	23
52	FINANCIAL AID	23
53	Institutional Scholarships	23
54	Student Credit	23
55	US Department Federal Loans	24
56	Satisfactory Academic Progress Policy	24-33
57	Reimbursement Policy	34
58	STUDENT COUNCELING SERVICES	35
59	CO-CURRICULAR ACTIVITIES	35-36
60	ACADEMICS	36

ITEM	HEADING	PAGE(S)
61	Health Science	36
62	Basic Environmental Sciences	37
63	Social Sciences and Humanities	37
64	Engineering	38
65	Business	39
66	RESEARCH	40
67	RESEARCH GROUPS AND CENTERS	40
68	Center for Research into Non-conventional Energy, Technology, Education and Science (CIENTEC).	40
69	Water and Environmental Resources Professorial Group (RAMA).	41
70	Construction Supervision and Certification Center.	41-42
71	Gender Research Center (CEG).	42
72	Social Research Team (EQUIS).	42
73	Educational Studies Center (CEED).	43
74	Applied Linguistics Center (CILA).	43-45
75	Center for Innovation in Higher Education (CINNES-INTEC).	44-45
76	INTEC University Micro, Small and Medium-sized Business Support Center.	45
77	PUBLICATIONS	45-46
78	SERVICES OFFERED	46
79	CONTINUING EDUCATION	46
80	ALUMNI	46
81	ACADEMIC PROGRAM	47-49
82	COURSES, STUDY PLANS	50-55
83	DESCRIPTION OF SUBJECTS	55-101

I. General information

INTEC'S HISTORY

The Instituto Tecnológico de Santo Domingo is a private non-profit University Founded in 1972 by a group of young professionals, committed to advancing Dominican society through their academic vocation, capabilities, and dedication to hard work.

INTEC emerged as an innovative University with the strong purpose of contributing to the country's social transformation, enhancing the quality of life of Dominican society, and preserving the country's heritage.

It was legally incorporated as a non-profit institution through Decree No. 2389 dated 15 June 1972. Presidential Decree No. 3673, dated July 4 1973, granted INTEC with the right to issue academic qualifications with the same scope, strength and validity as those awarded by the other officially recognized university institutions.

The university started its academic activities offering postgraduate programs, short refresher courses like Continuing Education, research programs and scientific publications. This established INTEC as a pioneering university in the country at the postgraduate level. In 1973 it went on to offer undergraduate degree courses as part of its curriculum.

INTEC's prestige has been built on the relevance and pertinence of its academic programs, the qualification and commitment of its faculty, the quality and dedication of its students, and fundamentally, the professional success of its alumni.

INTEC currently has around five thousand students, 80% at bachelor level and 20% at graduate level. Recent studies have found INTEC to be the Dominican university with the highest level of academic efficiency, measured by the fact that a high number of its students graduate on time. In its 41 years, INTEC has graduated 23,592 students.

Institutional philosophy

✓ MISSION

We are a pluralist university, committed to the education of capable, principled and internationally competitive individuals that contributes to the sustainable development of society through science and technology.

✓ **VISION**

To be recognized, nationally and internationally, as a model university, for its academic excellence, the quality of its processes and its contribution to the development of society

✓ **VALUES**

INTEC, as an intellectual community of professors, students and alumni, is founded on the following values.

- Scientific objectivity and rigor, academic excellence and social service.
- Non-partisan ideological, political and religious pluralism.
- Tolerance and respect between human beings, for the freedom of research and expression.
- No discrimination on the grounds of race, gender or nationality.
- Critical application of its academic work to Dominican reality.
- Directing its academic activities and programs towards the integrated development of education and its social commitment.

✓ **OBJECTIVES**

- Academic excellence: we are committed to meeting the highest standards of quality at every stage of the processes in which our activities are developed.
- Scientific rigor: we objectively develop our academic work towards the formation of highly competitive professionals that support their actions with arguments grounded in the laws of science.
- Social responsibility: we educated individuals socially involved and committed to their local and global environment, accepting the commitments we have with society, the environment and sustainable human development.
- Solidarity: we are sensitive to the needs of the community, demonstrating interest in finding solutions to their problems.
- Continuous innovation: we are generators of novel initiatives that enrich the institution's work and allow us to continuously improve what we do.

- Integrity: we act based on the coherence between principles and conducts, between plans and actions, and between knowledge and outcomes.
- Respect for diversity: we recognize the dignity of people, treating them with respect, justice and equity.

Organization

INTEC'S administration consists of three main divisions

- ✓ *The Board of Directors*: the highest authority and legal administrator of its patrimony. It is made up of fifteen members, including the President, university alumni and prominent national figures.
- ✓ *The Rector*: INTEC's highest executive authority, headed by the Chancellor.
- ✓ *The Academic Council*: the unit in charge of planning academic policy in accordance with the directives of the Board of Directors. Its members are the Chancellor, who chairs it, the Vice-Chancellors, the School Deans and the Division Deans.

Community

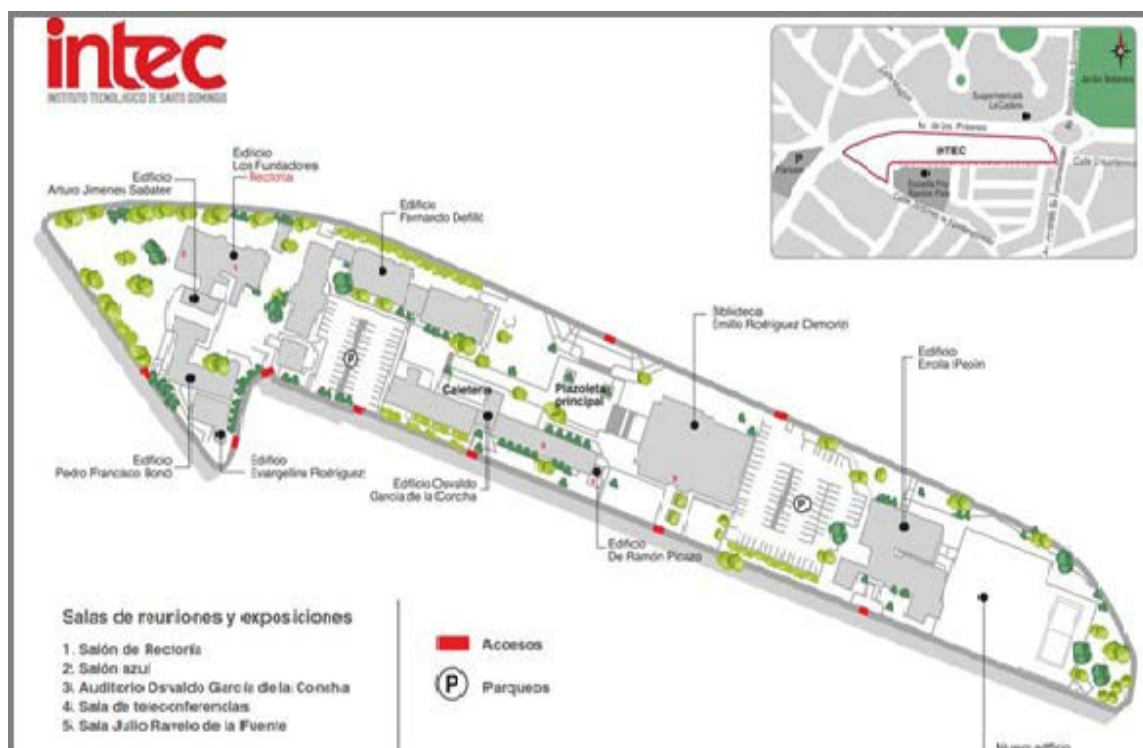
According to the role each plays towards fulfilling the institution's activities, INTEC community members are classified as:

- ✓ Students
- ✓ Professors
- ✓ Alumni
- ✓ Officials
- ✓ Employees
- ✓ Directors

Every community member must demonstrate competence, diligence, honesty, and follow the rules and values of the Institution. The rights and responsibilities specific to each member of the university are defined in special regulations.

Campus

INTEC is located on Avenida De los Próceres, in the Galá neighborhood in Santo Domingo, near the city's Botanical Gardens. The university campus is presented below.



All classrooms have Internet connection and are equipped with multimedia projectors. Audiovisual support is also available.

The Emilio Rodríguez Demorizi Library is located in the center of the Campus, a pillar of university life due to its important educational role. It is open to the INTEC community and to the general public.

The University also includes the Julio Ravelo de la Fuente Hall, and the Osvaldo García de la Concha Auditorium, which are used for academic, artistic and cultural activities.

Academic degrees

INTEC University offers academic and technological, undergraduate and graduate programs, for associate degrees, bachelor's degrees, master's, and doctorate degrees.

Rules and Regulations

The university has general policies, regulations and academic, administrative and disciplinary processes, as well specific requirements for each academic program. Students are responsible for reading, understanding and adhering to these policies and regulations. In addition, the student is responsible for complying with the school's curriculum upon enrollment.

Equal opportunities

The university guarantees equal opportunities to access the programs and services offered by the Institution. INTEC does not discriminate on grounds of religion, skin color, race, gender, age, physical disabilities, culture, nationality, political affiliation or any other classification covered by the Dominican Constitution.

II. Admissions

The Admissions Department is responsible for coordinating, directing and supervising the student admissions process. It must also insure compliance with Academic Rules.

Applications for admission

The student can make his/her application via the Internet or in person. Should the student use the Internet, the Admissions Department will reply via e-mail acknowledging receipt of the application, and specifying the date for completing the application.

If applies in person, the Admissions Department will provide the student an application form.

Admission requirements

Admission requirements may vary according to the student's nationality and the nature of the student's program.

REQUIREMENTS:

Undergraduate

□ Dominicans Nationals

- Duly completed application form.
- Photocopy of ID card.
- High School official student record
- Graduation Certificate.
- Medical Certificate.
- Current, legalized Birth certificate
- Two (2) passport photos 3 x 4 cm.
- Copy of the Admission fee receipt (Nonrefundable).
- Copy of the PAA Test receipt
- Copy of the PAA Test Application
- Certificate of no criminal records from state of residence for the last two years

□ **International students**

- Duly completed application form.
- Admission fee receipt (Nonrefundable).
- Two front 3 x 4 cm photos
- Original birth certificate certified and legalized by the Dominican Consulate and the Foreign Affairs Ministry in the Dominican Republic.
- Original birth certificate of one of the parents.
- Recent Good Conduct Certificate from state of residence.-
- Work reference letter in the Dominican Republic of one of the parents.
- Permanent residence certification.
- Medical certificate.
- Passport Photocopy.
- High School transcript or equivalent.
- Photocopy of your High School Diploma or equivalent,
- Birth Certificate (translated),
- Copy of PAA Test receipt
- Copy of PAA Test Application

Note: Documents from foreign countries require Certification of Apostils /legalized by Consulate/Foreign Affairs Ministry in DR translated into Spanish and legalized at the Dominican Consulate of country of origin. All translations must be legalized at the Dominican Attorney General's Office (Procuraduría General).

Transfer Students

The students must present evidence of completing at least 24 credits, with a minimum grade of 2.50 (75 %). Signed and sealed records for each subject attempted at each corresponding university.

Note: Courses taken five (5) years or more as of the admission date will not be considered for transfer of credit.

Admission requirements for students transferring from other institutions.

□ **Foreign transfers**

- Duly completed application form.
- Admission fee receipt (Nonrefundable).
- Two 3 x 4 cm passport photos
- Original birth certificate,
- Original birth certificate of one of the parents.
- Recent Good Conduct Certificate

- Work reference letter in the Dominican Republic of one of the parents.
- Permanent residence certification.
- Medical certificate.
- Transferred great point average (GPA)
- Photocopy of Passport.
- Record of university
- Photocopy of your High School Diploma or equivalent
- Birth Certificate (translated).
- Official certification of completion of secondary studies, issued by the Ministry of Education.

□ **Dominicans transfers**

- Duly Completed admissions form.
- Passport Photocopy.
- High School transcript or its equivalent, translated into Spanish.
- Minimum of 24 approved credits with a grade of no less than 70% (2 points) from the University of Origin.
- Copy of the university catalog or similar publication with program description
- Legal medical certificate.
- Admission fee receipt (Nonrefundable).
- Two 2 x 2 passport photos.
- Original Birth Certificate, translated into Spanish

Note: Documents from foreign countries require Certification of Apostil /legalized by Consulate/Foreign Affairs Ministry in DR translated into Spanish and legalized at the Dominican Consulate of country of origin. All translations must be legalized at the Dominican Attorney General's Office (Procuraduría General).

TRANSFER OF CREDIT COURSES

Eligible transfer courses must match at least with 80% of the course content at Intec. Transfer of credit will be applied to a maximum 50% of the program. Accepted transfer courses will receive recognition for the number of credits stated in Intec's programs.

Note: Courses taken five (5) years or more as of the admission date will not be considered for transfer of credit.

✓ **Graduate, Specialty Course and Master Degrees**

□ **Dominican students:**

- Duly completed admissions form.
- Photocopy of ID card
- Certification of no criminal records from where he/she has resided during the last two years.
- Official transcript and photocopy of university degree certificate legalized by the (MESCyT)
- Original birth certificate legalized and certified.
- Legal medical certificate.
- Two (2) 3 x4 cm front photos.
- Copy of the Admissions fee receipt (non-refundable).
- A 2.00 average is required (70%) for specialty courses
- Official Transcript from the university of origin, legalized by MESCyT
- Photocopy of university degree certificate legalized by the MESCyT.

□ **International students:**

- Duly Completed application form.
- Copy of the Admission fee receipt (Nonrefundable).
- Two front 3 x 4 cm photos
- Original birth certificate certified and legalized by the Dominican Consulate and the Foreign Affairs Ministry in the Dominican Republic.
- Original birth certificate of one of the parents.
- Certification of no criminal records from where he/she has resided during the last two years.
- Work reference letter in the Dominican Republic of one of the parents.
- Four years permanent residence certification issued by Migration Ministry.
- Legal medical certificate.
- Transferred great point average (GPA)
- Photocopy of Passport.
- Record of university qualifications
- Photocopy of your University Diploma or equivalent
- Birth Certificate translation
- Official certification of completion of secondary studies, issued by the Ministry of Education

Note: Documents from foreign countries require Certification of Apostils /legalized by Consulate/Foreign Affairs Ministry in DR translated into Spanish and legalized at the Dominican Consulate of country of origin. All translations must be legalized at the Dominican Attorney General's Office (Procuraduría General).

Document Acceptance and Verification

Upon receipt of documents required for admission, the information is subject to verification, verification completed, the student is assigned his academic calendar for the trimester, which contains the information that needed to complete the process.

Academic calendar

This is given to the student upon completing the admission process.

Admission Tests

1. College Board Academic Aptitude Test, PAA is divided in two segments:
 - a. Verbal comprehension: Critical reading, complete the sense of a sentence, analogical reasoning and indirect wording.
 - b. Mathematic Comprehension: Arithmetic, Algebra I, Geometric, Basic statistics and Probability
2. **Graduate:** Graduate PAEP is a standardized Spanish exam that measures the candidates' academic aptitude, cognitive ability and the academic scope of the candidates.

Programs requiring graduate test PAEP for admission:

Engineering:

Construction Administration
Advance logistical engineering and supply chains
Structural engineering
Maintenance engineering
Sanitary and Environmental engineering
Data telecommunications

Business

Senior Management

Admissions committee

This is the body in charge of studying, approving or rejecting, the admissions applications that have been submitted. It is made up of the Admissions Director, the

School Dean and a faculty member university counselor and the Dean of the basic course cycle.

All students who submit their admission documents for a specific trimester and fulfill the requirements are referred to the Admissions Committee for their review.

After their review, committee members cast their vote and sign the admissions application form, approving differing or disapproving the student's admission.

Enrollment

Once the student is admitted by the Admissions Committee, they are included in the academic computerized system and are assigned enrollment status. This initiates registration.

Student ID

This is the identification card issued to the student once s/he has been admitted as an active member of the university.

Re-admission

Enrolled students who withdraw must apply for re-admission. The procedures for application for readmission are published in the Academic Regulations. Application for re-admission is via the Registration Office.

III. First Time Students

First time students are processed by Student Services and Orientation Departments. They process students to facilitate meeting university key personnel, university facilities and available student services. They advice and counsel students to help them select their class schedules for the first trimester studies, secure the student card and the opportunity to meet their fellow students.

IV. Facilities and services

Community health center

INTEC provides medical services to the general public, offered through its Community Health Center, at low cost to private patients and free to INTEC members.

The Center is made up of two areas for patient services, a classroom with audiovisual equipment, a medical laboratory, ultrasound equipment, and a public dispensary. It offers services relating to General Medicine, Reproductive Health, Pediatric and Vaccination Program services.

The clinic is open from 8 in the morning till 6 in the evening, from Monday to Friday.

Cafeteria

The cafeteria is located in the university gardens, and is managed by an external concession. Breakfasts and lunches are served, as well as a range of juices, sandwiches and light snacks.

V. Academic Support

Red-INTEC

RedINTEC is the Instituto Tecnológico de Santo Domingo (INTEC)'s electronic network. This network connects the entire academic and administrative community, within the campus and beyond, including Internet access from all terminals, covering all classrooms, laboratories and offices.

RedINTEC is a strategic component for the university. INTEC recognizes the need to maintain an infrastructure that allows for easy information flow, in tune with the times.

Through this network, the community takes part in the following services:

- Access to the World Wide Web (WWW).
- Personal accounts for connection via modem, e-mail and disk space for uploading Web sites.
- Access to the academic control system from all the university's workstations, for authorized users.
- Access to bibliographical databases and other library resources.
- E-mail lists.
- Support for research thanks to the communications facilities with institutions in other parts of the world.

INTEC-virtual

The University has the INTEC-Virtual platform, which was designed by the institution from which it offers, via Internet technology and other media, diffusion of interactive academic programs. Through this platform, support is given to workgroups message forums; private e-mail lists with access restrictions, virtual online courses in real time, and an online qualifications system.

Videoconference suite

The institution has a video conference suite with ISDN access, with a speed of up to 380 KBPS with telephone access. In addition, an ATEI network (Spain) satellite dish and a satellite dish that currently points to the Mexican EDUSAT network.

Audiovisuals

The university's audiovisual department which offers the student and teaching community:

- Advice service for teachers in planning and design of their teaching activities and courses.
- Loan of equipment (TV, VHS, OHP, data show, computers, video filming, slide production...)
- A series of house produced and externally acquired videos, which provide teachers with a tool to support the creation of a learning environment that is linked to the everyday reality; while supporting the teacher in updating his/her knowledge.



Library

The Emilio Rodríguez Demorizi Library is the hub of the teaching-learning process. With connections to global and national networks, it offers modern information dissemination services. All these services are offered to the wider national student community as well as to the INTEC community.



Its services include:

- Circulation and loan
- Reference
- Computerized Bibliographical Search Service
- Document Reproduction
- Telephone Consultation
- Remote Access to Databases
- Technical Assistance Service

Laboratories

The university is equipped with laboratories which complement the learning and teaching process in a range of programs, at undergraduate as well as graduate level, allowing for in-depth practical application of theoretical knowledge.



The aim is for the student to know what to do, why it is done, and how. Laboratory facilities include:

- Material Science
- Fluid Mechanics
- Hydraulics
- Mecatronics
- Electronics and Communications
- Automation Processes
- Manufacturing Processes
- Geometrics
- Soil Mechanics
- Power Electrics
- Information Technology
- Anatomy
- Biology
- Industrial Design
- Mechanics
- Physics
- Research and Service Provision
- Remote Perception
- Chemistry

- Health/Sanitation
- Hydraulic
- Material
- Manufacturing
- Pharmacology
- Nanotechnology
- Renewable Energies
- Simulation in Medical Sciences

VI. Student Services

Student Services offer the students experiences, activities and services aimed at benefiting his/her quality of student life.

Family discount plan

Conceived as a way of helping families who have chosen INTEC for their professional training, it offers, depending on the corresponding category, a percent credit to alumni, alumni's children, and siblings.

Accident insurance plan

In partnership with a reputable Insurance Company with cover for:

1. Accidental death
2. Serious injury
3. Accident medical costs

International Student Health Plan

- ✓ Optimal health plan cover.

VI. INTEC Program for outstanding students, PIES

INTEC runs a program entitled “INTEC with Outstanding Students”, through which the country’s top-achieving students are awarded prizes. Those selected via this program can study at INTEC thanks to the financial support that INTEC contributes, in partnership with national companies and private individuals.

The requirements for taking part in this program can be applied for at the *Scholarships Unit*.

VII. Financial AID

INTEC, with public support from companies based throughout the country who have a social commitment to supporting Dominican education, selects outstanding high-school graduates at national level, from public and private educational centers, provides financial aid incentives to benefit the national community.

Students can apply for this aid at Intec’s *Scholarships Unit*.

Scholarship students are required to pursue a complete academic workload each trimester, and to keep an accumulated index of at least 3.00 points.

Institutional scholarships

A number of institutions and companies have scholarship plans as part of their staff development programs, as a way of supporting deserving young people’s training and development. Each of these institutions, in coordination with INTEC, establishes the guidelines for running these programs.

Student credit

INTEC students have access, through the Dominican Foundation for Educational Credit, and the Dominican Development Foundation, to loans to cover the cost of their studies.

US Department federal Loans

Financial Aid for US Citizens (Federal loans}

The Instituto Tecnológico de Santo Domingo (INTEC) participates in the United States Federal Loans Program.

Financial Aid assistance is available for students with US citizenship or legal residency who are on a part-time basis (6 credits) to fulltime enrollment, depending on their needs.

This information is available at INTEC's Financial Assistance Office, including rules and regulations, advice on how to take part in the Federal Family Educational Loans Program FFEL and assistance for the student loan program. Our medical school does not participate in this program at the present time.

Satisfactory Academic Progress Policy (US Participants)

Applicable to students who receive US Department of Education Financial Aid

Approved by the Academic Council Academic by Decree No. 1-29/11 of December 20, 2011

United States Federal Law that regulates the use of funds assigned to different programs for financial aid requires that all eligible students must meet satisfactory progress criteria as well as all other academic requirements as stated by the university where the student is enrolled.

The Instituto Tecnológico de Santo Domingo adopted a Satisfactory Academic Progress policy in accordance to the regulations of the United States Department of Education (CFR 668-E), Student Assistance Provision. This policy applies to all students who receive Financial Aid assistance that are offered as Federal Student Loans.

The purpose of this policy is to help students who benefit from US Financial aid make proper use of these funds while demonstrating a constant progress towards completing the requirements of their program of studies.

THIS FINANCIAL AID SATISFACTORY ACADEMIC PROGRESS POLICY IS:
EFFECTIVE FALL TERM 2011

Federal regulations require that all students who receive financial aid must maintain satisfactory academic progress and work towards an eligible degree or certificate. In addition, federal regulations require students be on pace to complete their degree or certificate before reaching a 150% maximum time frame limit

This policy provides for consistent application of standards to all students within categories of students, *e.g.*, full-time, part-time, undergraduate, and graduate students, and other educational programs established by the school.

Determination of Financial Aid Satisfactory Academic Progress Standing

Satisfactory Academic Progress will be determined for all applicants prior to being awarded financial aid. Determination will be based on all previous academic history regardless of whether or not financial assistance was received. Satisfactory Academic Progress will be reviewed at the end of every trimester.

Satisfactory Academic Progress (SAP) will be measured at the end of each trimester and a student must meet all three (3) of the following requirements to be eligible for financial aid:

Requirement 1: University Cumulative Grade Point Average (GPA) (Qualitative Measurement)

An undergraduate student must maintain a cumulative GPA according to the chart present below.

Requirement 2: Cumulative Pace of Completion (Quantitative Measurement)

An undergraduate student must maintain a minimum pace of completion of 67%. Pace of completion is calculated by dividing the cumulative credit hours successfully completed by the cumulative number of attempted credit hours.

Requirement 3: Maximum Time Frame for Degree (Time Frame)

Students are permitted to receive financial aid for 150% of the required number of credits to earn their degree.

Chapter I
Definitions

Article 1. Academic year: is defined as any three trimesters.

Article 2. Academic Load: is the amount of credits a student attempts in a given trimester.

- Article 3. Fulltime students:** enrolled in a minimum of 12 credits during a trimester. **Halftime students:** enrolled in a minimum of six (6) credits per trimester.
- Article 4. Specialty Courses and Master's Degree Programs**
Fulltime students: enrolled in a minimum 6 credits per semester.
Halftime students: enrolled in a minimum 3 credits per semester.
- Article 5. Attempted Credits:** are all credits for which a student enrolls throughout his program of studies independent of any classification he may enjoy including course withdrawals, failed subjects or repetitions.
- Article 6. Approved Credits:** Credit recognition awarded to a student enrolled in a program, course or other academic activity by means of evaluation that awards a minimum 2.00 grade or its equivalent in other grading scales.
- Article 7. Successfully completed credit hours:** are credit hours that have been earned and have a grade value of 4 points (A) through 2 points (C)
- Article 8. Grade Point Average (GPA):** Cumulative average of all final grades obtained through test and performance evaluation at the end of each semester of studies. Grade Point Average formula considers honor points, credits and grades.
- Note:** Transfer of credit courses are no included in a student's Grade Point Average minimum GPA required at each segment as presented in this document.
- Article 9. Satisfactory Progress Warning:** Warning issued to a student by the financial aid office that he/she is not, or will not, meet satisfactory academic progress criteria in his next period of studies. During this time the student is considered to be meeting Satisfactory Academic Progress criteria and is able to receive financial aid funds
- Article 10. Probation:** A student is placed on probation after he has undergone suspension of financial aid participation, has presented a successful appeal before the Financial Aid Committee and has been determined to be meeting Satisfactory Academic Policy. During this time the student is considered to be meeting Satisfactory Academic Progress criteria and is able to receive financial aid funds
- Article 11. Financial Aid Suspension:** When a student does not meet the requirements of the school's Satisfactory Academic Progress Policy

during any given period of evaluation after and has been given Satisfactory Progress Warning.

- Article 12. Appeals:** The process to request review of Satisfactory Progress Determination.
- Article 13. Academic plan:** is a specific study plan developed by the SAP Appeals Committee. The plan, if followed, will ensure that the student is able to meet the institution's satisfactory academic progress standards by a specific point in time.
- Article 14. Remedial course work:** Intec does not offer remedial course work for credit.
- Article 15. Repeat course:** is a course that is usually repeated in a semester subsequent to when it was originally taken. For each semester the attempted credit hours are counted but only the most recent grade will be used to determine whether the course was successfully completed or not; only the most recent grade is used in the GPA calculation.
- Article 16. Incompletes (Conditional grades) (I):** are given for courses where the student fails to complete a segment or requirement of a course, but in the judgment of the instructor does not need to repeat the course. Incomplete (I) grades are counted as attempted credit hours but are not successfully completed credit hours. Incomplete (I) grades are changed to the appropriately earned grade when the required course work is completed and evaluated. Incomplete (I) grades becomes an F if it required work is not completed by the close of the next semester. Incomplete (I) grades are not included in GPA calculations. Incomplete (I) courses will impact students' pace of completion.
- Article 17. Failure grades (F):** are 0.00 grades points per credit. F grades are included in GPA calculations and count as attempted but not successfully completed credit hours.
- Article 18. Withdrawal grades (W):** are given when a student drops a course after the second week of the trimester or withdraws completely from the university after the official add/drop period, resulting in a W grade being assigned for all dropped courses. W grades are counted as attempted, but are not successfully completed credit hours. W grades are not included in GPA calculations.

Chapter II

Satisfactory Academic Progress

Article 19. Students who participate in the United States financial Aid Programs must meet Satisfactory Academic Progress Policy criteria at the end of each trimester evaluation.

Article 20. Student Financial Aid eligibility is determined at the end of each trimester in accordance with the university's Satisfactory Academic Progress Policy and the student progress report from the Registrar's office.

Article 21. To meet Financial Aid Satisfactory Academic Progress the student must:

- Maintain the minimum cumulative grade point average or higher required for each trimester of the program
- Complete successfully two-thirds of attempted credits at the end of each trimester.
- Ability to complete program of studies within 150% maximum time frame limit

Article 22. Maximum Time Frame Eligibility

Federal regulations require that the student complete their degree or certificate within 150% of the credits required for a program of study. For example, if a degree requires 90 credits, a student must complete the degree within 135 attempted credits.

Attempted credits include all earned, unearned, repeated, and transfer credits. All attempted credits count toward this limit even if financial aid is not received or there are extenuating circumstances for not completing credits.

A student's record will be evaluated to determine if they are able to complete a degree or certificate within the maximum time frame allowed. When it is determined a student will not complete their program within the 150% credit limit, the student will be suspended from receiving financial aid. The 150% maximum credit rule is applicable to students who change their major or pursue double majors and second degrees.

Article 23. Satisfactory Academic Progress Statuses

Warning

Unsatisfactory

Probation

Academic Plan

Article 24. Appeals and Reinstatements

A student not meeting the satisfactory progress requirements due to extenuating circumstances (i.e. death of a relative, illness or injury of the student, other extenuating circumstances, etc.) may request reinstatement of financial aid by submitting a written appeal in letter or email format. The appeal must describe the circumstance(s) which prevented the student from meeting the satisfactory progress requirements, and the action(s) the student plans to take to bring him or her back into a satisfactory progress status. In addition to the written appeal, the student must submit the Satisfactory Academic Appeal Form, which can be obtained from Financial Aid Office.

Chapter III Satisfactory Academic Policy Determination

Article 25. Student evaluation is determined on quantitative and qualitative criteria, as well as a time frame policy

Article 26. Qualitative measurement is based on the student's general point average, GPA).

Article 27. Satisfactory Academic Progress determination of the Qualitative measurement is based on minimum grade point average as presented in the following table.

Premed

PERIOD OF STUDIES	MINIMUM GPA
Upon completion of the first Trimester	2.00 or more
Upon completion of the second Trimester	2.25 or more
Upon completion of the third Trimester	2.50 or more
Upon completion of the forth Trimester	2.50 or more
Upon completion of the fifth Trimester	2.50 or more
Upon completion of the sixth Trimester	2.50 or more

Medical School

PERIOD OF STUDIES	MINIMUM GPA
Upon completion of the first Trimester	2.00 or more

Upon completion of the second Trimester	2.10 or more
Upon completion of the third Trimester	2.20 or more
Upon completion of the forth Trimester	2.25 or more
Upon completion of the fifth Trimester	2.30 or more
Upon completion of the sixth Trimester	2.35 or more
Upon completion of the seventh Trimester	2.40 or more
Upon completion of the eighth Trimester	2.50 or more
Upon completion of the ninth Trimester	2.50 or more
Upon completion of the tenth Trimester	2.50 or more
Upon completion of the eleventh Trimester	2.50 or more
Upon completion of the twelfth Trimester	2.50 or more
Upon completion of the thirteenth Trimester	2.50 or more
Upon completion of the fourteenth Trimester	2.50 or more
Upon completion of the fifteenth Trimester	2.50 or more
Upon completion of the sixth teen Trimester	2.50 or more

Other Programs

PERIOD OF STUDIES	MINIMUM GPA
From first to final trimester	2.00 or more

Masters, Graduate Programs

PERIOD OF STUDIES	MINIMUM GPA
Upon completion of the first Trimester	2.80 or more
Upon completion of the second Trimester	2.85 or more
Upon completion of the third Trimester	3.00 or more
Subsequent trimesters	3.00 or more

Article 28. Maximum time frame to complete the program is defined as 150% of the stated program length.

Paragraph 1: All courses attempted are considered in the 150% calculation regardless if the participant has received or not received financial aid.

Paragraph 2: Incompletes are considered attempted credits.

Paragraph 3: Cancellations during the period allotted for changes are not considered as attempted credits. Therefore they are not included in any of the calculations to determine Satisfactory Academic Progress

Article 29. Transfers: Transfer of Credit courses will be included as part of the maximum time frame calculation.

Article 30. Course approval: Students are required to approve a minimum 66% of credits attempted in each trimester.

Article 31. Financial Aid Appeals Committee Composition:

1. Academic Vice-chancellor (President)
2. Registrar (Secretary)
3. School Dean
4. Student Services Dean
5. Student's Program Coordinator

Article 32. Students with status of Satisfactory Progress Warning, Probation or Financial Aid Program suspension will participate in the university's academic support programs to assist them in regaining Satisfactory Academic Progress.

Chapter IV Status

Article 33. Financial Aid Good Standing

Student has a cumulative GPA of 2.0 or higher, student is completing two-thirds (66.67%) of all attempted credits each term, and student is able to graduate within 150% maximum time frame limit.

Article 34. Financial Aid Warning

Student's cumulative GPA dropped below a 2.0, and/or student did not complete two-thirds (66.67%) of all attempted credits in a term, and student is able to graduate within 150% maximum time frame limit. A student is able to receive financial aid while on financial aid warning status, but must meet SAP standards during that term of enrollment to remain eligible for subsequent financial aid.

Article 35. Financial Aid Suspension

Student did not meet SAP standards while in Financial Aid Warning or Financial Aid Probation status, or it is determined that the student will not be able to graduate within 150% maximum time frame limit, or a student in Financial Aid Academic Plan status fails to follow the plan. Student is not eligible to receive financial aid while on Financial Aid Suspension.

Article 36. Financial Aid Probation

This status is only granted upon the approval of a Financial Aid SAP Appeal. Student may receive financial aid for one term but must meet

SAP standards by the end of that term to remain eligible for subsequent financial aid.

Article 37. Financial Aid Probation with Academic Plan

Student fails to meet SAP standards for the term in which the student is on Financial Aid Probation. This status is only granted upon the approval of a Financial Aid SAP Appeal with the condition the student follows an academic plan. The student is eligible to receive financial aid as long as the student continues to follow that academic plan.

Article 38. Reinstatement of Financial Aid Eligibility

Financial aid eligibility may be reinstated when the student raises his/her cumulative GPA to a 2.0 and has achieved a cumulative completion rate of two-thirds (66.67%) of all credit hours attempted. Reinstatement of financial aid eligibility may also occur upon approval of a Satisfactory Academic Progress Appeal.

**Chapter V Review
and Appeals**

Article 39. Satisfactory Academic Progress Appeal Process

All students: have the right to request a review of the grades received at any given trimester if he believes there is an error in his evaluation. The request must be filed within three days after grade notification.

A student may request consideration for reinstatement of financial aid eligibility through a formal appeal process by completing the Satisfactory Academic Progress Appeal form with appropriate documentation. An appeal must be received and approved prior to or during a term for which aid is being requested. Aid will not be awarded retroactively for a prior term in which financial aid eligibility was suspended or during which satisfactory progress was not made.

A student may appeal if the reason for failure to meet the minimum satisfactory academic progress standards was the result of extenuating circumstances and if the situation that caused the poor performance has been resolved. Documentation of extenuating circumstances may be required. Students will receive notification of the results of their appeal via the Student Services Office within 1-2 weeks of submission.

Appeals may result in any one of the following actions:

- Reinstatement on probation
- Reinstatement on an academic plan where the student will be held to specific requirements
- Denial of reinstatement
- Satisfactory Academic Progress determination.

Article 40. Maximum Time Frame Extension Appeal Process

Students have the right to request an extension of their financial aid eligibility once per degree objective should they exceed or expect to exceed the maximum credits allowed for their degree or certificate. Students will need to complete a Time Frame Appeal form and include an academic plan. Submission of an appeal does not guarantee approval.

If an appeal is approved, coursework will be limited to courses required for the completion of the degree or certificate. In addition, a student must maintain a minimum cumulative GPA as indicated in the required index table and successfully complete all courses listed on their academic plan. Failure to meet the requirements of the approved time frame appeal will result in suspension of financial aid eligibility.

If a Time Frame Extension Appeal is denied, a student may submit a written request for review of the appeal to the College Financial Aid Appeals Committee. The committee meets quarterly. If the Committee's decision is to uphold the denial, the student may not submit any subsequent requests for funding consideration.

**Chapter VI General
Considerations**

Article 41. This policy is effective and mandatory from the date of its publication.

Article 42. This policy will be considered officially published upon date it appears in the university's Web page it may also be publish in hard copy or digital format. If any discrepancy should arise the Web publication will be considered as the final authority.

Article 43. Items not foreseen in this policy will be subject to Intec's regulations according to Article 25, h of the Estatutos del Instituto Tecnológico de Santo Domingo.

Reimbursement Policy (US Participants)

Any student who completely withdraws from the University and is a recipient of Federal Title IV Financial Aid is subject to the following policy regarding refund and repayment of those funds:

- The amount of federal Title IV financial aid earned is based on the percentage of the trimester completed. This is calculated by dividing the number of days the student attended classes by the number of days in the trimester.
- Any student who withdraws on or before the 60 percent point in the trimester will have to return federal Title IV financial aid funds disbursed. A student who withdraws after the 60 percent point of the trimester is considered to have used 100 percent of funds provided as financial aid. In this case, the funds are considered used and will not have to be returned to the federal Title IV financial aid programs.
- If a student officially withdraws (drops out of) a class before the first week, he or she is entitled to 100% tuition reimbursement. Registration fees are not subject to cancellation and are non-refundable. Classes dropped this way are included on the academic record with a mark of "R".
- A student's withdrawal date is determined by INTEC to be:
 1. The date the student began the withdrawal process or notified the school of his or her intent to withdraw. Any student wishing to completely withdraw from the University must do so by contacting the Registrar's office.
 2. The midpoint of the trimester if the student fails to officially notify (in writing) the university of his withdrawal, but makes his intent to withdraw known otherwise.
 3. The university procedure to determine the last date of attendance (unofficial withdrawal) is by documenting the last date of attendance to an academic related activity.

The **Policy on Withdrawal** from the university is published in the "Reglamento Académico de Grado" and is available on line <http://intec.edu.do/>

- Unused or unearned funds will be returned to the program as per specifications in Title IV Federal funds guidelines. Funds must be returned no later than 45 days after the withdrawal determination date as determined by the institution.
- An immediate return to the Federal Direct Loan Title IV financial aid program may be required of a student when cash has been disbursed in excess to the amount of aid he or she was eligible to receive during any term.
- The student may receive a post-withdrawal disbursement if less cash was disbursed than the amount which the student was initially eligible for. If this is the case, the Office of Financial Aid will notify the student within 30 days of withdrawal date that these funds are available. The student must request these late disbursements in writing to the Office of Financial Aid.

VIII. Academic Counseling service

This service is designed to aid students to achieve academic excellence through vocational and academic counseling, psychological advice, academic support and follow-up and a life skills program.

IX. Co-Curricular activities

Students have the opportunity to take part in co-curricular activities. These activities contribute to the participants' integrated and harmonious training, to develop a sense of institutional loyalty and projection towards the community. These activities are voluntary in nature, and at no cost to the student. They include sports, arts, culture and ecology. Participation in these activities is open to the wider INTEC community.

A total of 13 groups carry out their regular activities every Friday and/or Saturday. These are:

- ✓ **Sports:** Chess, Basketball, Volleyball, Table Tennis, Tennis, Karate, Soccer and Baseball.
- ✓ **Culture:** INTEC Orators Club
- ✓ **Arts:** Theater Projection, INTEC Chamber Choir y INTEC Dance Troupe
- ✓ **Ecology:** Intec-Ecological



Sporting disciplines take part in games and organized tournament with universities that are affiliated to the Dominican University Rectors' Association and annually in the University Sports Games, as well as occasional exchanges with Sports Clubs.

The Theater Projection, the INTEC Dance Troupe and the INTEC Chamber Choir perform at activities and events both on and off Campus, when invited to do so.

The INTEC-Ecological conservation group delivers environmental talks with audiovisuals to primary schools, high schools and clubs in the capital and across the country. They also carry out reforestation and beach-cleaning activities.

In addition to the activities mentioned, the Co-curricular Department also organizes artistic and cultural events throughout the year on the university Campus, such as the traditional Christmas Meeting where the groups perform a synthesis of the activities they carried out in the preceding year.

X. Academics

INTEC consists of five academic colleges, which cover the undergraduate and graduate programs. These are:

Health sciences

Its mission is to train competent and efficient doctors, who are ethically responsible and able to adapt to new technological developments, with a preventive medicine approach, and with the ability to diagnose and cure the most common primary health complaints.

The health sciences are offers the following programs:

Undergraduate:

- ☐ Degree in Medicine

Graduate:

- ☐ Masters in Bio-ethics
- ☐ Masters in Integrated Adolescent Health
- ☐ Specialty in Health and Social Security management
- ☐ Specialty in Clinical Nutrition

Accreditations:

Medical Board of the State of California

National Committee for the International Medical Accreditation

✓ **Exchange programs:**

Medical students have the chance to acquire practical experience in the United

States, Latin America and France, at hospitals and universities that have exchange agreements with INTEC.

Basic and environmental sciences

This is made up of the following sub-sections: Mathematics, Chemistry, Physics, Human Being and Environment and Biology.

It also includes professorial groups or research centers such as:

- ✓ INTEC Environmental Research Center (CEGA-INTEC),
- ✓ INTEC Renewable Energy Center (CIENTEC),
- ✓ Mathematics and Mathematics Education Research Center (CIMEN).

As well as the laboratories and the subjects it administers, the Basic and Environmental Sciences College has the following research laboratories and offers the following services:

- Remote Perception and Digital Image Processing Laboratory, jointly administered with the Engineering Faculty
- Research and Service Provision Laboratory

Both are equipped with modern instruments and are able to provide services to the external sector and to conduct relevant research. The Programs it offers are:

Undergraduate:

- ☐ Mathematics

Graduate:

- ☐ Specialty/Masters in Mathematics
- ☐ Specialty in Environmental Education
- ☐ Masters in Environmental Sciences

Social sciences and humanities

Its mission is to contribute to the search for the truth, to revitalize the ability to reflect and propose new ways of building hope, of reformulating, remaking, re-evaluating and rescuing society's perception of itself, to contribute knowledge of development that is more coherent with life, on public awareness arising and individual and collective social responsibility to contribute knowledge about the imbalance between environmental protection and public awareness-raising of its care and protection, about the negative influence of non-scientific or ethical management of the communications media.

The INTEC Social Sciences and Humanities academic programs aim to contribute its best effort in affirming life. To provide appropriate human and scientific tools for building a social project that is more livable and adequate for everyone, a society that promotes planet-wide human identity that allows its members to take part in the tapestry of life in an equitable manner.

These are:

Undergraduate:

- ☐ Psychology degree
- ☐ Social Work degree
- ☐ Degree in Humanities and Philosophy (Guaranteed by the Pedro Francisco Bonó Center for Philosophy Studies)

Graduate:

- ☐ Masters in Gender and Development
- ☐ Masters in Sustainable Human Development
- ☐ Masters in Teaching Social Sciences
- ☐ Masters in Family and Systems Therapy
- ☐ Specialty in Early Education
- ☐ Master in Education
- ☐ Specialty in Educational Centers Administration
- ☐ Specialty and Masters in Applied Linguistics
- ☐ Specialty in Social Pedagogy
- ☐ Specialty in Language Teaching and Mathematics in the First Cycle of Basic Education
- ☐ Masters in Humanistic Studies

Engineering

The Engineering' mission is to train professionals with a profile of excellence, who are able to contribute to the country's development and to compete successfully on the global market or continue their graduate level studies in the country or overseas.

The following programs are available from this college:

Undergraduate:

- ☐ Civil Engineering degree
- ☐ Industrial Engineering degree
- ☐ Mechanical Engineering degree
- ☐ Electrical Engineering degree
- ☐ Electrical Engineering and Communications degree
- ☐ Systems Engineering degree

- ☐ Industrial Design degree

Graduate:

- ☐ Specialty in Transport
- ☐ Specialty in Industrial Engineering
- ☐ Specialty in Information Technology
- ☐ Masters in Building Administration Sciences
- ☐ Masters in Structural Engineering
- ☐ Masters in Sanitation and Environmental Engineering
- ☐ Masters in Data Telecommunications
- ☐ Masters in Labor Risks

Business

The Business College's mission is in the answers to national and international needs, offered as part of a philosophical institutional framework with Innovative, with solid leadership in training competent, enterprising professionals with a commitment to society, ethics and values.

The College's vision is: "To be the leading Business School in the country, for the quality, up-to-date nature and diversity of its programs, as well as the high level of professionalism of its graduates".

It offers programs at Undergraduate, Graduate and Continuing Educational levels, under the headings of Administrative Sciences, Economy and Management. The academic offer is:

Undergraduate:

- ☐ Degree in Business Administration
- ☐ Degree in Accountancy
- ☐ Degree in Marketing
- ☐ Degree in Economics

Graduate:

- ☐ Specialty and Masters in Administration and Human Resources
- ☐ Specialty and Masters in Corporate Finance
- ☐ Specialty and Masters in International Trade and International Economics
- ☐ Specialty and Masters in Taxation Management
- ☐ Specialty and Masters in Quality and Productivity Management
- ☐ Masters in Upper Management
- ☐ Masters in Marketing

XI. Research

The Research and Extension Division (DIE) is the unit that is responsible for managing research at INTEC, as well as the implementation, follow-up and evaluation of research policy.

The DIE consists of a Research Council, made up of 8 members, who are, to date, the Dean of the Research and Extension Division, as an *ex officio* member; five more members from the INTEC community, representing each of the academic faculties and two external (non-INTEC) members. The Research Council's functions include:

- ✓ To study and approve research projects which have been submitted to the DIE.
- ✓ To advise the Dean and the research Director in scientific and technological research matters.
- ✓ To recommend conventions with national and international research bodies.
- ✓ To reflect on updating research policies.
- ✓ To take on management of scientific and technological research policies.

XII. Research Centers and Groups

Center for research into alternative energy sources, technology, education and science (CIENTEC). INTEC's Center for Research into Alternative Energy, Technology, Education and Science (CIENTEC) is an academic arm of INTEC, which was formed due to the need to define scientific and pragmatic methodologies for the study and research of different means of producing alternative energy.

CIENTEC depends on the Basic and Environmental Sciences Faculty, framing its activities within the Faculty's objectives and programs. In the same way, it works in coordination with the Physics Sub-section. The Center has a flexible structure in relation to the Faculty's curricular organization. Its basic objectives are as follows:

- To conduct studies and research of national and international scope on different alternative energy sources.

- To provide feedback and help perfect INTEC teachers and students through provision of workshops, courses and conferences related to alternative energy sources.
- Promote and create consciousness of, and interest in, the economic and environmental benefits of alternative energy use.
- Publish essays, articles, documents and research on a range of related themes, in the Science and Society Magazine, or in CIENTEC's special publications.
- Conduct academic exchanges with other national and international institutions with the same specialty.
- Act as advisor to INTEC authorities on energy matters.
- Work with other INTEC research groups, as well as with other specialist units at INTEC on interdisciplinary aspects of energy.

Water and environmental resources group (RAMA). The Water and Environmental Resources Professorial Group is an arm of the Engineering Faculty that brings together professionals with concerns about Hydrology, Hydraulics and the Environment.

RAMA's area of work cover: Hydrology, Hydraulics, Sanitation and the Environment.

One of the main areas of international cooperation is environmental concern; even more so when it comes to the serious problem of water resources, why is this? Because when it's scarce it is necessary and also when it's abundant it harms the environment with flooding caused by excess water.

Center for building supervision and certification. This Center, part of the Engineering College, has as its main purpose the supervision and certification of engineering projects, in all its branches, that guarantee the quality of the works that are executed.

The main areas of work are building construction projects from the design stage until the control of works (planning, design, execution and control), in civil engineering specialties (structures, hydraulics, roads, bridges, construction and administration of building projects) and the engineering that goes with construction works (electrical, mechanical, industrial, electronics and systems engineering, as well as architecture).

The areas of emphasis for international cooperation are the agencies, centers, institutes, foreigners who have research and offer services in all aspects of engineering construction works and architecture, such as, for example: architectural design, structures, site management, costs, budgets, time and movement studies, construction materials and equipment, etc.

Gender studies program (CEG). Part of the Social Sciences and Humanities College, it is devoted to producing, analyzing and disseminating knowledge about the status of women and gender relations.

Through its undergraduate level, graduate and extension academic offer and its work as part of civil society, CEG-INTEC seeks to promote the changes needed to discriminatory practices that limit the integrated development of human beings.

Social research team (EQUIS). Part of the Social Sciences and Humanities College, the team is made up of a group of associated researchers who may or may not be INTEC teachers, but all are interested in research, analysis, study, reflection and discussion about the different aspects and manifestations of social reality.

It works in the areas of Urbanism, Environment, Community Self-management and Dominican Civil Society Strengthening, whose objective is to create coordination tools and mechanisms and relations between Civil Society Organizations (CSOs) and the state to develop a legal taxation framework and public policy in an inter-institutional and consensual manner.

EQUIS, through research and investigation programs, currently works with the Information, Systems and Municipal and Urban Studies Center (CISEMU).

EQUIS's work and commitment are reflected in various objectives:

- ✓ Conducting research and projects about Dominican reality, aimed at solving concrete problems with community participation, carried out with local as well as international funding under cooperation agreements.
- ✓ Take part in debates and seminars about the above-mentioned issues, as well as about the reality and political connectivity in the country; urban, land, municipal, local development, migration and social movement issues, together with other themes related to the national dynamics.
- ✓ Promote and employ interdisciplinary work as a basic research and knowledge generation method.
- ✓ Promote academic exchanges with other similar centers, universities, with state entities, community organizations, etc.

- ✓ Develop municipal authority training programs, executive as well as administrative, with the aim of training a new local and municipal leadership. Within these programs we offer courses on Local Development and Municipal Management and a Diploma in Municipal Management in the Dominican Republic, as part of cooperation agreements with international organizations.

Center for educational studies (CEED). Part of the Social Sciences and Humanities College, the center's aim is to influence the quality of Dominican education, open to the production of knowledge and the creation of informed opinion about educational policies, management styles and formulas for applications and development of proposals, envisaged as fundamental contributions to the Dominican educational system.

Purpose:

- ✓ Strengthen a reference space that offers diverse services to institutions and organizations linked to the educational arena.
- ✓ Develop and favor the quality and innovative character of educational programs.
- ✓ Encourage the formulation and application of public policies that are coherent with the development of quality educational processes.
- ✓ Promote the dissemination and wide and plural debate educational problems.
- ✓ Encourage the use of educational research as a central tool for obtaining appropriate information.
- ✓ Contribute to the development of the educational system as a whole, systematically improving teacher training, study plans and research.

Center for applied linguistics (CILA). The Research Center for Applied Linguistics is an INTEC academic initiative that was set up in response to the need to present, both globally and systematically, scientific and pragmatic methodologies for the study and research into the problems that arise with the teaching of Spanish in the country.

Purpose:

The Research Center for Applied Linguistics is not a space for consuming communications specialists' theoretical reflections that arise in the Spanish lessons, and in the national linguistic community.

- ✓ Raise awareness of the language teaching problems and of linguistic communication, in sectors of our society whose social and social communication role is pre-eminent: university extension work will be carried out with these diverse sectors through courses, meetings, etc.
- ✓ Design and implement research programs of national and international scope in the different language teaching domains and in linguistic communications, mainly related to Spanish as the mother tongue in the Dominican Republic.
- ✓ Provide feedback to INTEC's Spanish Faculty:
 - a) Through research and analysis of the problems that are presented to the student in the class and the production of materials for the area,
 - b) With alternatives for perfecting the teachers: workshops, courses, conferences, etc.
- ✓ Provide feedback to the Masters in Applied Linguistics, through extension and research activities developed by CILA.
- ✓ Work jointly with other Faculties of the basic course cycle, with other INTEC research group, as well as with other special units like the Library and Continuing Education, in interdisciplinary aspects of communication.
- ✓ Advise the INTEC authorities on linguistic matters.
- ✓ Publish essays, articles and research on themes related to Spanish teaching and a range of linguistic communication themes, in the Science and Society magazine or in a special publication by the Research Center for Applied Linguistics.

Center for innovation in higher education (CINNES-INTEC). The Center's mission is to promote reflection and understanding of the demands and perspectives that accompany institutional development, as well as that of the Dominican higher education system and its impact on national development. This center aspires to become a space for interchange and cooperation with the aim of contributing to the analysis and formulation of creative proposals to confront key themes for the transformation of the Dominican higher education system, in the context of new knowledge management methods and integrating the pedagogical potential of new technology to the task of teaching.

Basically, priority will be given to themes linked to developing innovative skills, systematizing information with quality criteria, pertinence and relevance and improvement of institutional remits. Special emphasis will be placed on the teaching staff, as a central hub for generating educational change at higher level. It also seeks,

through this center's work, to continue strengthening INTEC as a space for collective construction with a positive link to the world around us.

This mission is in harmony with the principles and values that define INTEC's culture: the continuous search for excellence, respect for fellow human beings, a service vocation and social commitment, participating in team work, and the ethics of responsibility.

Center for support for micro, small and medium-sized businesses (CAMPE). The Center for Support for Micro, Small and Medium-sized Businesses, CAMPE, has as its mission to contribute to the improvement of Dominican people's quality of life through supporting and helping direct efforts from and towards Dominican businesses, especially micro, small and medium sized (MIPYME), so that they become competitive in the national and international arena, mainly through providing services from the university, and establishing actions in coordination with other actors working in the MIPYME sector such as unions, guilds, government, supporting NGOs, etc.

Areas of Action are:

- Business Development: Technical Assistance and Training
- MIPYME sector support policies
- Studies and research

With the execution of numerous activities and projects through CAMPE-INTEC, the university has positioned itself as one of the main actors in the Dominican MIPYME sector.

XIII. Publications

INTEC University Publications Department is responsible for implementing the Institution's publishing policy. As part of this, it is in charge of publishing Science and Society magazine, institutional documents and texts, laboratory manuals and books derived from the institution's teaching and research work.

The University's research work has been recorded in a monographic series as well as in periodicals. The monographic series include the following:

- Research
- Education
- Bibliography
- Monographs

The periodical series includes:

- INTEC Documents
- Science and Society magazine
- Analytical Bulletin
- Biomedical Tables of Contents Bulletin.

XIV. Service provision

Through the Service Provision Offices a number of services are offered to the external sector, including advice, training, studies and research in the areas of Formal Education, Human Resources, and Industrial and Administrative Development.

XV. Continuing education

Its objectives include contributing through offering informal educational activities to update, explore in-depth and increasing the specialization of the country's professionals, university students and post-secondary students. It also offers specific training programs to the adult and youth population aimed at helping them achieve a greater degree of cultural development and a level of training that allows them greater advantages when entering the productive system.

XVI. Alumni

INTEC has an alumni office whose main objectives are to:

Strengthen links between the alumni and the university, encouraging their active participation in the implementation of the plans formulated by the institution.

Conduct annual surveys of our alumni, with the aim of obtaining information about their labor and economic situation, types of employers, levels of work satisfaction, post-graduate studies and/or interests for specialization and refresher courses.

Design and implement activities and programs that enable support and advice to students and the University's intake, in order to help their insertion into the labor market.

Guarantee opportune replies to applications made by alumni and/or channel information on opportunities for refresher courses, post-graduates, masters, abroad as well as in INTEC, as well as scholarship and international funding opportunities.

Support the alumni with the application process and meeting the requirements for participation at International Universities specialization programs, with which INTEC has exchange pacts.

Provide the required support to the Alumni Association, for the effective fulfillment of the expected aims, representing INTEC at the heart of the activities run by this body.

Plan and coordinate activities for the recognition and dissemination of information about alumni and their contribution to the economic and social life of the country and/or their place of residence.

XVII. Undergraduate programs

PROFILE OF PROFESSIONAL TRAINING AT INTEC

INTEC's curricular intentions are expressed in the aspiration to train a human being at university level in the spirit of academic excellence, conscious of the country's problems and its opportunities to develop as a nation, with a vocational service based on four basic principles: moral rectitude, social responsibility, scientific objectivity and creative and constructive initiative.

In this sense, in each of its undergraduate programs INTEC aspires to train a professional human being:

- ✓ Equipped with a cultural background that allows him/her to understand the reality and contribute to change.
- ✓ Trained to interpret, evaluate, judge, update and construct knowledge and know how to communicate this effectively.
- ✓ With the ability to commit her/himself to others and work cooperatively.

- ✓ With professional competences that allow him/her to contribute to the identification and resolution of problems that arise in our society, and with the potential to integrate him/herself properly into actions that promote equitable national development.
- ✓ Who has acquired knowledge that allows him/her to understand the current world, with flexible attitudes that enable a swift adaptation for coping with the changing labor market.
- ✓ Capable of generating employment.
- ✓ Able to take part in a respectful, intelligent, critical and proactive matter in debate and the search for solutions to the major ethical and scientific problems facing humanity.
- ✓ Has developed capacities for searching for, evaluating and using information.
- ✓ Familiar with the most recent information and communication technologies and capable of managing ever more complicated systems.
- ✓ Trained to value the natural environment, and in possession of responsible and committed behavior with the sustainable use of natural resources and the quality of the environment.
- ✓ Trained to understand his/her cultural environment and cross its boundaries, protecting one's own cultural identity and valuing other people's cultural identities.
- ✓ Able to take swift and timely decisions, in the spirit of freedom and independence that makes it possible to express his/her talents and creativity.

CURRICULAR STRUCTURE

The study plans for the different degree courses are structured into three different and successive cycles that take into account the transition that students go through and the principles of progressive and transverse grading. These cycles are:

- ✓ *BASIC COURSES.* This cycle is common to all the institution's courses, where the development of values, capacities and general competencies is emphasized, systematized in keeping with the institution's philosophy and the demands of scientific work and according to the student's profile that needs to be trained.

- ✓ *TRAINING.* In this cycle we promote the dominance of rigor and explanatory help of sciences, that offer basic knowledge for an integrated training that sustains its professional development and which guides and motivates it, with a critical sense, to the knowledge of the reality and responsible participation in this. This cycle is common to all courses of one Faculty.
- ✓ *PROFESSIONAL.* Exclusive cycle to each course. In this the student must achieve professional training in the corresponding Faculty, not just as an instance of investigation and explanation of the reality, but also as a provider of principles and strategies for intervention in this.

CURRICULAR STRUCTURE OF THE BASIC COURSE CYCLE

The Basic Course Cycle Plan is made up of nine subjects. Subjects that refer to situations that are made up of aspects related to different scientific and humanistic disciplines, as well as to cognitive and procedural capacities from which the expected attitudes are generated.

FIRST TRIMESTER

AHO-101 - Institutional Academic Guidance (2 credits)

AHC-101 - Spanish Language Communication I (4 credits)

CBM-101 - Analytical Algebra and Geometry (5 credits)

CSS-101 - The Human Being and Society (4 credits)

AHX-001 - Humanities Option (2 credits)

SECOND TRIMESTER

AHC-102 - Spanish Language Communication II (4 credits)

CBM-102 - Differential Calculus (5 credits)

CBN-101 - The Human Being and Nature (4 credits)

AHQ-101 - Scientific Work (4 credits)

ING-101 - Basic Information Technology (1 credit)

XVIII. Courses, study plans

CIVIL ENGINEERING COURSE

INTEC's Civil Engineering course is defined as a curricular and academic structure organized into a range of scientific, technical and technological knowledge needed in order to achieve the optimum advantage of the resources, and in this way satisfy Dominican society's development needs in the areas of building¹, communications², infrastructure³ and alternatives⁴.

Civil Engineering is a profession that requires a solid, integrated training that enables the use of ingenuity, creativity and social commitment in the generation and achievement of solutions for the physical infrastructure that the Dominican Republic needs.

Training that enables the development of one's own capacities in the profession is achieved through learning strategies that guarantee the integration of knowledge generated by physical sciences, mathematics, humanities and social sciences, highlighting research, practical application and team work.

This course presents its new intake with the possibility of conducting interdisciplinary tasks, activities and alternatives that generate Civil Engineering works, in the public as well as private spheres.

The fundamental purpose is focused on training students with a high capacity for work, with a strong sense of independence, with effective answers to the changes, and who

¹ Buildings: residential projects (houses, apartment buildings, housing complexes, etc.) Commercial projects (office buildings, shopping centers, etc.) Industrial projects (chemical and thermoelectric plants, factories, etc.) and Service projects such as sports stadiums, churches, universities, schools, theaters, and others. (Reference: "Administration of Construction Companies" by engineer Carlos Suárez Salazar, p.56, 2nd edition, 10th reprint 1996, EDITORIAL LIMUSA, S.A. de C.V., GRUPO NORIEGA EDITORES)

² Communication: Road projects, airports, seaports, and more. (Reference: Ibid. note 1)

³ Infrastructure: hydroelectric projects, dams, irrigation canals, and more. (Reference: Ibid. note 1)

⁴ Alternatives or Studies: feasibility projects, architectural, structural cementation, hydrology, topographical, environmental impact studies, etc. (Reference: Ibid. note 1)

have combined competencies that allow them to identify, conceive, design, produce and develop physical infrastructures for general human activities.

This central purpose is expressed transversally, in a strategic curricular continuity, in the following aspects:

- ✓ To support an appropriate setting for building knowledge with scientific breadth.
- ✓ To provide an adequate and necessary environment that allows integrated development and the ability to study independently.
- ✓ To promote the development of: social sensitivity; a critical and proactive attitude; consciousness of professional quality; application and scientific methods for decision-making and the development of research projects
- ✓ To develop skills to act ethically, respecting and addressing needs and the socio-cultural reality of the environment s/he is working in.



ELECTRICAL ENGINEERING COURSE

Electrical Engineering, as with other branches of engineering, is a profession that basically consists of the use of ingenuity and creativity for the formulation, analysis and solution of problems. The electrical engineer tackles energy problems, especially those related to electrical energy and its uses. This means that s/he is in charge of planning, constructing, operating and administering the generation of electrical energy, and electricity transmission, distribution and control systems.

The study objectives for Electrical Engineering are a set of elements that consist of generation, transformation, distribution and consumption of electrical energy.

The study plan for the Electrical Engineering program is designed for the student to develop, as well as the actual knowledge of the course itself, management and administrative skills that optimize his/her coping in managing projects and in professional activity in general.



ELECTRONIC ENGINEERING COURSE

The purpose of the Electronic Engineering and Communications course is to train solidly skilled professions, coordinating their knowledge of electronic and communications technology, together with other complementary areas in order to provide innovative solutions that satisfy the needs of our productive world and our society in general.

With this in mind, the aim is:

- ✓ To develop in the student, through the teaching of mathematical and physical sciences, a capacity for analysis that is required for comprehending and solving the phenomena and problems that arise with electromagnetic wave radiation, with semiconductors and in other elements of electrical circuits. This ability will help the student to design solutions and automatic control systems, for analyzing signals and communications.
- ✓ To provide the student with theoretical and practical knowledge that is related to digital systems in general, and electrical devices that will enable him/her to create alternatives to the problems that arise in the industry.
- ✓ To provide the student theoretical and practical knowledge of basic communications, digital communications and electronic telecommunications systems, so that s/he may study, design, adapt, create and plan communications systems that can support this important component of the national economy.
- ✓ To provide the student with theoretical and practical knowledge aimed at the design and implantation of software applications that support the technological areas mentioned earlier.
- ✓ To train professionals with solid social and humanistic principles, who exercise their professional activities with responsibility towards nature and society.



INDUSTRIAL ENGINEERING COURSE

INTEC's Industrial Engineering course has as its central purpose the training of professionals with excellence in Industrial Engineering and related branches, which are capable of developing, implementing and maintaining innovative and creative processes, thus contributing effectively to the sustainable development of the productive, services, and public and private administration sectors.

With this in mind, there is a commitment to train professionals with a solid scientific and technological base, steeped in the ethical principles that reflect the institution's philosophy, and competent in business management and organization of production systems.

In order to achieve this, it will promote the development of capacities and competences, which are listed as follows:

- ✓ Capacities to develop, implement, optimize and maintain innovative and creative processes in the business, industrial and service fields.

- ✓ Capacities to acquire, quantify, systematize, analyze and evaluate information about production systems, goods and services.
- ✓ Competencies for designing, implementing, administrating and coordinating activities aimed at the production of goods or service provision.
- ✓ Capacity to determine the quality and quantity of human resources, financial requirements, the installation's conditions and function that ensure that the operations for the production and distribution of goods and services are developed according to the aims and objectives that were set out.



MECHANICAL ENGINEERING COURSE

Mechanical engineering comprises of the design, construction, installation, improvement and maintenance of mechanical systems related to industrial, commercial and agricultural activities, using the available resources efficiently. The purposes of the course are:

- ✓ To train professionals who are guided towards operational, maintenance and implementation management of engineering systems used for the exploitation and transformation of resources or manufactured goods.
- ✓ To equip professionals with a solid scientific and technological training, who are able to study, project, direct, build, operate and maintain the different types of thermo mechanic, electro mechanic and fluid mechanic machines, tools and elements used in industrial processes.
- ✓ To train professionals who are able to interpret new technological and economic developments in the field, for the administration of limited resources, and to find solutions that take industrial hygiene and security into consideration, prevent pollution and respect ecological balance.



SYSTEMS ENGINEERING COURSE

The central purpose of the Systems Engineering course is to train professionals with skills in the area of Information Technology and in areas where this relates to business, industrial, financial, educational organizations, and any others where it may be necessary to manage systematized information. For this purpose, systems engineers need to understand the way these organizations work in order to fulfill their task.

In this way, INTEC aims to train professional Systems Engineers who have the scientific and technical skills to:

- ✓ Conduct functions of information systems analysis, design, development and implementation.
- ✓ Administer, direct and implement IT projects, with the necessary criteria for conducting research that permits the adoption, transfer, adaptation and generation of science and technology in IT.
- ✓ Apply new technologies as a tool in a range of production activities, and cultural, recreational and social services in general.



INDUSTRIAL DESIGN COURSE

The central purpose of the Industrial Design course is to train a professional who is equipped to integrate design into productive processes in businesses, using it as a powerful tool for development, and at the same time, as a differentiating factor.

It is also intended that the designer be able to understand the cultural, industrial and productive reality of our society from the perspective of his/her profession, in such a way that it responds to the new challenges of the contemporary world.

INTEC intends to train industrial design professionals who possess three specific skills in three sub-areas that impact directly on the complete design and product development process in an industry:

- ✓ Product design
- ✓ Product engineering
- ✓ Product management.

The training objectives are:

- ✓ To become familiar with and understand theories of the relationship between people-object-context.
- ✓ To develop a capacity for analysis, abstraction and synthesis for production and theorizing of object-based replies.
- ✓ To develop creative activities and behaviors.
- ✓ To develop anticipatory decision-making skills
- ✓ To develop capacity for working in interdisciplinary teams

- ✓ To become familiar with and manage the constituent elements of shape, materials and production processes, and the aspects related to their use.
- ✓ To place training and practice into a specific historical and socio-economic context.

XIX. Subject Descriptions

BASIC COURSE

AHO-101 Institutional Academic Guidance (2 credits)

The Institutional Academic Guidance subject acts as a bridge and link between the university and the student, contributing to the creation of a positive relationship between the two parties and developing the students' sense of responsibility for their academic and INTEC training, by contributing to the new student's adaptation to the institution's university life. To identify some institutional organizational and study strategies and to introduce the students to INTEC, its history, philosophy, curriculum and academic rules in order to achieve his/her identification and thus get to know his/her rights and obligations.

AHC-101 Spanish Language Communication I (4 credits)

Places great emphasis on written communications and oral expression. Uses reading strategies for comprehension, analysis and interpretation of contents and structures of a text. Also, through working with paragraphs and synthesis preparation, it provides a basis for developing more elaborate writing strategies that equip the student for writing more complex texts, at level II.

The purpose of this first level is completed via the use of strategies for the identification and analysis of themes, organization of primary and secondary ideas, in written texts as well as orally. Reading literary works is a fundamental element for achieving general and integrated training of the students.

CBM-101 Analytical Algebra and Geometry (5 credits)

This comprises of the study of all necessary preliminary aspects for a first calculus course. Starting with conceptual contents of functions, algebraic functions, trigonometric and logarithmic functions, conical sections, polar coordinates and parametric equations, this will create a base for learning opportunities that develop the student's representational, analytical, interpretative and information synthesis skills; systematic comprehension of processes; communication of ideas, opinions and feelings in a sustained matter; and team work skills.

Based on strategies that combine information and communication technologies, exploration and team work provide, moreover, opportunities for developing positive attitudes towards Mathematics as a discipline that helps us to understand and interpret our surroundings.

CSS-101 Human Being and Society (4 credits)

This subject is an introduction to Social Sciences, aiming to establish the conceptual and experiential framework in which the students can develop a vision of themselves and explore this in depth, as part of the reality that has shaped our socio-cultural identity, and our identity as a species.

Starting from knowledge recovery and the many scientific theories used to study society in all its aspects; the social construction process is made comprehensible.

In this way, the participants develop the ability, within flexible conceptual frameworks, to understand and take part in changing social contexts in a critical manner.

AHX-001 Humanities Option (2 credits)

Educational or sports subject which will combine theory and practice in workshops that allow students to develop appreciation, interpretation and execution skills in areas such as theater, dance, cinema, singing, musical appreciation, literary appreciation, esthetic education, fine arts appreciation, tennis, table tennis, chess, basketball, karate or any other discipline that is considered appropriate.

AHC-102 Spanish Language Communications II (4 credits)

Emphasizes written production, equipping the student with adequate strategies for mastering writing as a process: choosing themes, analyzing and producing structures of corresponding texts and structuring facts, problems, solutions and demonstrating arguments. It will also cover the organization of ideas, developing writing techniques, use of bibliography, etc. At the same time it explores in depth reading and producing written text, in these three areas: management of more specific structures and more complex ones. Applying strategies with attention to more diverse skills, mastering the contents related to students' diverse interests, with the language lesson and that broaden their cultural horizons. Reading literary works is an important part of this second level of this subject.

CBM-102 Differential Calculus (5 credits)

Consists of the study of the fundamental principles of Differential Calculus, developing abilities and skills for the understanding of everything that is related to functions and methods, limits and continuity, derivation, applications of derivatives and introductions to anti-derivatives; which by using a methodology that combines information and communications technology and is based on representation, interpretation, formulation and resolution of problematic interdisciplinary situations, aims to develop skills in communication, abstraction, model manipulation, systematic understanding of processes and reasoned decision-making.

CBN-101 Human Being and Nature (4 credits)

Study and comprehension of basic and general ecological concepts, as well as the environmental reality and the balance of different national eco-systems. In parallel, this subject strives to create consciousness of the individual's responsibility for defending the natural environment; motivate active participation in defense of environmental protection and rational exploitation of natural resources, in everyday life and work.

AHQ-101 Scientific Tasks (4 credits)

Scientific Tasks provides the student with theoretical elements for evaluating scientific phenomena and technological inventions from a holistic perspective, meaning that, this takes into account the social, historical and individual contexts and into which the above-mentioned cognitive phenomena are inserted. It also offers critical, open and creative reflection about the philosophical processes that sustain the evolutionary and innovative process of Science and Technology and its connection to and impact upon professional, cultural and social development.



ENGINEERING

ING-201 Introduction to Engineering (3 credits)

History of Engineering, Engineering Functions, Fields of Applications, Project Engineering, Methods and Designs, Models and Optimization, Computing Tools and Simulations. Definition of Engineering and introduction to the main principles involved; Familiarization with the pensum structure and the reason for the profile designed by the University; Explanatory introduction to the subjects that make up the pensum and the motivations of the assigned pre-requisites. Familiarization with the main fields of application. Design of study plan. Highlights the relevance of critical vision and spirit. Engineering ethics in the face of the country's economic and social reality. Development of general perspective of engineering vision.

Pre-Requisite: Before taking this subject the student must have passed 25 credits.

ING-202 Elements of Computing (5 credits)

Study of computer science concepts and terminology. Comprises of the basic organization of a computer, hardware and software, the use of Boolean algebra and numerical systems. Introduction to structured algorithmic language and the basic structures of selection and repetition. Development of applications at a level of basic and medium complexity, using high-level languages, understanding the concepts of functions, procedures, sequencing, iteration, scope of variables, and an introducing to the concepts of classes and examples of the concepts of class and OOP. Laboratory hours must be allocated to the study of this subject. The intention is that practical laboratory work will allow the student to achieve certification in the tools employed.

Pre-Requisite: CBM-102 Differential Calculus

ING-203 Descriptive Geometry and Drawing (4 Credits)

The student should acquire knowledge of the use of traditional drawing instruments and plane and spatial abstraction of objects. Emphasis will be placed on the use of a computer as an auxiliary for computer assisted drawing.

Pre-Requisite: ING-201 Introduction to Engineering and ING-202 Elements of Computing

ING- 205 Statics (4 Credits)

Fundamental principles and concepts. Force on a particle. Vector analysis. The result of forces. The result of various concurrent forces. Newton's First Law of Motion. Diagram of a free body. Spatial force components. Moment of a force. Moment of a pair. Equilibrium of a static body. Distributed forces. Centroids. Forces over submerged surfaces. Structures and machines. Friction. Moment of inertia. Product of inertia. *Pre-requisite: CBF-202 Physics II*

ING-206 Resistance of Materials I (4 credits)

Concept of effort. Axial load. Tension effort. Compression effort. Cutting effort. Deformation. Effort-deformation diagram. Hooke's Law. Elasticity module. Deformations of elements submitted to axial load. Elastic properties of materials. Elastic properties. Fatigue. Torsion. Pure flexion. Shear load. *Pre-requisite: ING-205 Statics*

ING-207 Dynamics (4 Credits)

Rectilinear movement of particles. Curvilinear movement of particles. Relative movement. Newton's Second Law. Rigid body translation. Rigid body rotation. Kinetic energy of a particle. Potential energy. Energy conservation. Impulse and momentum. Rigid kinematical body. Rigid body kinetics on a plane. Rigid body kinetics in space. *Pre-requisite: ING-205 Statics.*

ING-208 Fluid Mechanics (5 Credits)

Fluid properties. Stress on a fluid. Pressure. Pascal's Law. Variation of pressure on a static fluid. Conservation of mass. Conservation of momentum. Continuum equation. Energy equations. Bernoulli's equation. Momentum equations. Applications. Potential flow and boundary layer theory. Viscous forces. Laminar flow. Turbulent flow. Permanent flow in tubes and conduits. *Pre-requisite: ING-207 Dynamics*

INM-300 Thermo-dynamics (4 Credits)

Study of the basic laws and principles that regulate the use of thermal energy and provide the base for the study of fluid mechanics, and heat and mass transference.

Pre-Requisite: CBF-202 Physics II

INM-327 Materials Science (4 Credits)

Study of material properties, dynamic properties, deformation, hardening, ferrous and non-ferrous alloys; annealed, normalized, tempered; equilibrium diagram, T-T-T diagram. Properties of non-metallic materials. Study of the interaction between

materials and the environment. *Pre-Requisite: CBQ-202 CHEMISTRY II, ING-206 Materials Resistance I*



BASIC SCIENCES

CBM-201 Integral Calculus (5 Credits)

This subject develops the basic aspects related to the integration process and infinite series. The conceptual contents that are worked on are: integration, integration methods, improper integrals, applications of the integral, introduction to differential equations of the first order and infinite series. *Pre-Requisite: CBM-102 Differential Calculus.*

CBM-202 Vector Calculus (5 Credits)

This subject contains the basic aspects of Differential and Integral, Vector Calculus in a range of variables. The themes covered are as follows: Vectors and Analytical spatial geometry, vector functions, functions in a range of variables, multiple integrals and integration in vector fields.

Pre-Requisite: CBM-201 Integral Calculus.

CBM-203 Differential Equations (5 Credits)

In this subject the basic aspects related to ordinary differential equations are covered, equation systems and differential equations in partial derivatives. The themes to be covered are: basic concepts, 1st order Differential equations, Applications; High order Differential Equations, Applications; Differential equations systems, Applications; differential equations in partial derivatives, Applications; and introduction to Laplace and Fourier's transform equations.

Pre-Requisite: CBM-202 Vector Calculus.

CBM-208 Linear Algebra (5 Credits)

In this course basic aspects of matrices, determinants, vector spaces and linear transformations are discussed. Themes to be covered are: Matrices, determinants and equation systems; vector spaces and linear transformations; Values and vectors; quadratic and hermitic bilinear forms and spaces with internal product. *Pre-Requisite: CBM-203 Differential Equations.*

CBM-206 Probability and Statistics (4 Credits)

This subject deals with the basic aspects of Descriptive Statistics and the Theory of Probability. The following themes are discussed: descriptive statistics, probability, contingent variables and distribution of probability, some discrete distributions of probability, some continuous distributions of probability and joint distributions of probability. *Pre-Requisite: CBM-201 Integral Calculus.*

CBF-201 Physics I (5 Credits)

CBF-202	Physics II	5 Credits)
<p>In this subject, methods of Newtonian mechanics are applied to the study of fluids, oscillations and waves, and the formal study of Thermodynamics is started. The themes dealt with are as follows: Static equilibrium and elasticity, Oscillatory motion, Fluid mechanics, ondulatory motion, Sound waves, superposition and static waves, Temperature, heat and the first law of Thermodynamics and thermal machines, entropy and the second law of Thermodynamics. <i>Pre-Requisite: CBF-201 Physics I.</i></p>		

This subject introduces the study of electromagnetics, as a basic interaction between Nature and which plays a central role in the workings of devices such as radios, televisions, electric motors, computers and other electrical equipment. The themes to be covered are: Electrical charge and Coulomb's law, Electrical fields, Gauss's law, Electrical power, Capacitance and dielectrics, currents and resistivity, continual current circuits, magnetic fields, sources of magnetic fields and Faraday's law. *Pre-Requisite: CBF-202 Physics II.*

This subject introduces the study of knowledge of alternate current circuits and electromagnetic waves. Specifically, light and other related phenomena are studied: reflection, refraction, interference, diffraction and polarization. Some of the main applications of electromagnetics like the transformer, the antenna, photographic camera, the composite microscope and fiber optics are presented here. The following systems are covered: Inductance, Alternate current circuits, Electromagnetic waves, The nature of light, Geometric optics, Interference of light waves and Diffraction and polarization. *Pre-Requisite: CBF-203 Physics III.*

This subject studies matter, its structure, its transformations and the laws that rule it and offer a firm basis about chemical concepts and principles. The course content offers a combination of descriptive and theoretical material aimed at expanding the student's capacity to interpret observations, to reason using analogy and increase awareness of the importance of Chemistry in everyday life. The themes to be covered are: Science and measurement, Properties of matter, Structure of matter, Chemical compounds,

Stechiomitry, Hydrogen and Oxygen, States of Matter and Water and solutions. *Pre-Requisite: CBM-102 Differential Calculus.*

CBQ-202 Chemistry II (4 Credits)

This subject aims to cover the study of kinetics and chemical equilibrium, energy changes that accompany chemical reactions, Redox reactions and their applications in electro chemistry. It also studies in detail the physical and chemical properties of the elements that make up the different Groups and Families, classified in the periodic table of elements, as well as the main compounds that these elements can form and their applications in everyday life. It also introduces the student to the study of Organic Chemistry. Altogether, the material included in this program will equip the student for learning other concepts that are more complex than Chemistry and of other related sciences. The themes covered are as follows: Kinetics and Chemical Equilibrium, Ionic Equilibrium, Chemical Families I, Thermo chemistry, Chemical Families II, Metals and Organic Chemistry. *Pre-Requisite: CBQ-201 Chemistry I.*



CIVIL ENGINEERING COURSE

INC-306 Materials Resistance II (Credits 4)

Study, comprehension and application of diagrams, application of deformation by flexion or hyper static cases, deformation energy, relationship between stresses on different planes, rupture theories, stress concentrations, elasticity equations. *Pre-Requisite: ING-206 Materials Resistance I*

INC-367 Civil Drawing (Credits 4)

Principles of Graphic Language, Basics of Delineation, Analysis and Study of Space, Legends and Symbols Applied to Engineering, Dimensional Plants, Concept of Orthographic Projection, Sections, Auxiliary Views, Dimensioning, Perspectives and Pictorial Drawing. *Pre-Requisite: INC-312 Topography II*

INC-315 Soil Mechanics (Credits 5)

Study and application of the exploration of soil, rock formations, gravel and mechanical sedimentation analysis, plasticity, soil classification, volumetric changes in earth movements, permeability, soil resistance, Rokine Couiond theory, cargo capacity. *Pre-Requisite: INC-304 Geology, INC-313 Construction Materials.*

INC-304 Geology (Credits 3)

Minerals. Their classification and properties. Rocks. Main types and their formation. Processes of Erosion. Geological structures. Earthquakes, landslides and flooding processes. Subterranean water. *Pre-Requisite: INC-312 Topography II*

Study of analysis methods into hyper static structures, including matrix methods and rudiments of advanced structure mechanics with the aim of applying to plates and shells. *Pre-Requisite: INC-309 Structural Theory I*

Study of the basic principles of reinforced concrete and the design of bar structures in the static state and in the plastic range. *Pre-Requisite: INC-310 Structural Theory II, INC-367 Civil Drawing.*

Study and comprehension of the basic concepts and principles for the design of pre-compressed, reinforced concrete structures, and some ideas for seismic structure design. *Pre-Requisite: INC-316 Structural Design I*

Study and comprehension of the basic principles of steel structures in the elastic and plastic type. *Pre-Requisite: INC-318 Structural Design II*

Study and use of Hydrology in the engineering field. Analysis of natural phenomena, data collection and the different methods of analysis applied to hydrological design. *Pre-Requisite: ING-208 Fluid Mechanics I*

Study and design of hydraulic resources structures and systems with an emphasis on hydraulic design: dams, reservoirs, etc. applied to the country's conditions. *Pre-Requisite: INC-307 Hydrology*

Study of the basic hydraulic principles for problem solving and hydraulic resource structure design; as well as analysis and writing of reports on this subject. *Pre-Requisite: INC-314 Hydraulics II*

Study, design, construction and operations of pluvial and sanitary drains, and how they relate to public health.

Pre-Requisite: INC-364 Sanitation Engineering I

Study and comprehension at operational level of the basic concepts of topography and geodesics. Knowledge and management of the instruments that are most frequently used in topographic works, and how to carry out the different types of elevations, cabinet works and area calculations.

1. *Journal of the American Medical Association*, 1997; 277: 1039-1043.

Study and comprehension of the basic principles of leveling, as well as the use of instruments needed for this: managing the booklet, profiles, direct leveling, level curves.

Pre-Requisite: INC-360 Topography I

Study and comprehension of vehicular transport problems, as well as road characteristics, planning, economy, study, links, drainage, tunnels, legislation, regulations and specifications. *Pre-Requisite: INC-315 Soil Mechanics INI-301 Economic Engineering*

Study and management of preliminary works, infrastructures, superstructures, roadbeds, paving, maintenance, transport engineering, road signs, urban and rural routes, auxiliary services needed for any project of this nature. *Pre-Requisite: INC-321 Road Engineering I*

Construction planning, construction processes, methods and project execution systems; steel in works, quantification and optimization of steel; cement, mixing, emptying, compacted, cures, additives, timbering, equipment and non-conventional works. *Prerequisite: INC-313 Construction Materials INC-316 Structural Design I*

Study of the guidelines for construction firm administration, planning, organization, management and control of a construction firm, budget and cost analysis, direct costs, indirect costs, cost optimization, work programming. *Pre-Requisite: INC-320 Construction Methods*

Global environmental issues. The DR's Environmental Legislation. Water pollution. Solid waste management. Air pollution. Evaluation of Environmental Impact. *Pre-Requisite: INC-364 Sanitation Engineering I*

Characteristics of Transport. Basics. Traffic study. Time, delay and speed. Infrastructure design. Characteristics of transport flow. Theory and evaluation of flow. Analysis of capacity and level of service. *Pre-Requisite: INC-322 Road Engineering II*

INC-354 Legal Aspects of Engineering (Credits 3)

Dominican Legislation: History and Development. Basic Concepts of the Dominican Constitution, Labor Regulations and Legislation, Tax Obligations and Formalities, Social Security and Accidents at Work, Industrial Health and Safety, Other Applicable Work Related Laws. *Pre-Requisite: to have taken 180 credits in the subjects.*

INC-355 Civil Engineering Seminar (Credits 3)

Develop research related to a theme of general interest for Civil Engineering to be presented independently under the supervision of a research advisor. *Pre-requisite: to have taken 220 credits in the subject.*



ELECTRICAL ENGINEERING COURSE

INE-301 Circuits I (5 Credits)

Concepts of charge, current, voltage, resistivity, energy and power, Ohm's law, Kirchhoff's laws, methods for solutions for circuits. Circuit theorems, inductance and capacitance and simple RL and RC transistorize. Application and use of Laplace transformation techniques. *Pre-requisite: CBF-203 Physics III*

INE-302 Circuits II (5 Credits)

Sinusoidal steady state, complex numbers, phasor concepts, general solution methods for CA circuits, complex power, average power and RMS values, polyphasic circuits and Fourier series. *Pre-requisite: CBM-311 Mathematical methods for engineers, INE-301 Circuits I*

INE-336 Electromagnetic Fields (4 Credits)

Vector analysis, Coulomb's law, electric field intensity, density of electrical flow, Gauss's law, divergence, energy, potential, conductors, dielectrics, capacitance, mapping methods, Poisson and Laplace equations, static magnetic fields, magnetic forces, materials, inductance, variable fields over time, Maxwell's equations, plane waves and transmission lines. *Pre-requisite: CBF-204 Physics IV.*

INE-304 Electrical Engineering Project (4 Credits)

Strategic planning process. Definition of projects, project life cycle and formalization of projects. Project Administration. Detailed economic and technical feasibility study. Written presentation of the engineering project, evaluating its content and formal presentation. *Pre-requisite: 200 Credits Passed.*

INE-327 Regulation of Electricity Markets (4 Credits)

Deregulated electricity markets. General concepts, market evaluation, concept of marginal, transition towards competitive structures (financial problems, organization,

regulatory and operational) restructuring and privatization processes. Electricity market schemes, integrated national, centralized generation and transmission, centralized generation and transmission in generation, integrated area, centralized transmission, single buyer (pool), competitive pool. Economic basics of generation, economic signals in deregulated electricity markets, basic characteristics, external factors, regulation of natural monopolies, costs and benefits, regulation and efficiency. *Pre-requisite: INE-326 Power systems I*

INE-322 Electricity Distribution Planning (4 Credits)

General introduction to energy supply systems, basic characteristics of distribution systems, prognostics and meeting demand, design of medium-tension networks, design of MT/BT transformation posts, design of low-tension networks, suggesting scenarios and technical and economic evaluation for scenario selection. *Pre-requisite: INE-337 Transmission Lines, INI-301 Economic Engineering*

COMMUNICATIONS BLOCK

INE-306 Communications (5 Credits)

Fourier's series, Fourier's transforms, specter of frequencies of continuous or discrete functions. Delta Function, convolution, detection and processing of signals, modulation (am, fm, pm) and basic communications circuits. *Pre-requisite: INE-336 Electromagnetic Fields.*

ELECTRONICS BLOCK

INL-313 Electronics I (5 Credits)

Analysis and design of circuits with diodes. Characteristics of the bipolar transistor. Analysis of FET signals. RS and RL effects. Frequency response of BJT and JFET transistors. Composite configurations. Applications of the operational amplifier. Basic amplification circuits. Integrated circuits. Fabrication and characteristics. *Pre-requisite: INE 302 Circuits II*

INL-315 Digital Electronics (5 Credits)

Design of combinatory and sequential systems. Boole's algebra, synthesis of logical circuits from logical elements, small and medium-scale integrated circuits. Design of logical computer, Flip-Flops, counter and temporizer circuits using lcs. Pulse theory. Microprocessor development. *Pre-requisite: INE-302*

INL-322 Power Electronics (5 Credits)

Basics of electrical control systems. Running electrical motors. Control components. Control circuits schemes and development. Maintenance of control circuits. PLC applications and development schemes. *Pre-requisite: INE-303 Control Systems INL-313 Electronics I*

POWER BLOCK

INE-337 Transmission Lines (4 Credits)

General information about transmission lines (types and applications). Parameters of lines with two simple conductors, settled and miscellaneous conductors. Parameters of lines with earth returns. Phenomenon of the stable state of transmission lines. Concentrated parameter lines. Transitory phenomena. Transmission line cards. Electrical power transmission. *Pre-requisite: INE-336 Electromagnetic Fields*

INE-323 Electric Machines (5 Credits)

Electromechanical basics. Alternators. Parallel function of alternators. Synchronized engines. Polyphasic induction dynamos. Monophasic engines. Specialized dynamos. Relations of power, energy and efficiency for DC and AC dynamos. Magnetic circuits, transformers, star-triangle, star-star connections, etc. Energy, force, power, translation systems, rods, solenoids, networks, interrupters. Rotational systems, triasic induction engines, triphasic synchronized engines, solid state power devices, polyphasic rectifiers and inverters. *Pre-requisite: INE-302 Circuits II INE-336 Electromagnetic Fields.*

INE-325 Plants and Sub-stations (4 Credits)

Power transformers. High-tension switches. Tri-polar short circuit, Relays and protection. Power breakers. Fuses. Low-tension switched. Earth systems. Distribution boards. Overtension and coordination of isolation. Transformer and distribution stations. Oil quality control. Putting transformers into service. Installation regulations in bad weather. Control diagram, operation regulations. *Pre-requisite: INE-323 Electrical Machines I.*

INE-326 Power Systems I (5 Credits)

Electrical current concepts, balanced and unbalanced triphasic circuits, symmetrical components, representation of power systems, single-filament diagram, systems by unit. Formulation of matrices for bus de admittance and impedance. *Pre-requisite: INE-323 Electrical Machines I, INE-337 Transmission Lines.*

INE-345 Power Systems II (5 Credits)

Basic models, transformers, lines, generators, charges. Large networks, revision of matrix algebra, charge flow, optimal flow and voltage profile. Symmetrical components, symmetrical and asymmetrical faults. Economy and operation of power systems. *Pre-requisite: INE-326 Power Systems I*

INE-329 Stability of Power Systems (5 Credits)

Energy constant and equation of mechanical acceleration. Stability criteria. Critical angle for fault interruption. Step by step solution. Limit of stability. Stability of stationary and transitory state.

Pre-requisite: INE-345 Power Systems II.

INE-331 Protection of Power Systems (5 credits)

Protection by developers. Basics and principles of relay operations. Current transformers. Potential transformers. Protection for engines and generators. Protection of bars and transmission lines. Calculation of faults and selection of relays. *Pre-requisite: INE-326 Power Systems I*

INE-328 Electrical Installations (4 Credits)

Converging transmission centers. General boards, elements of line protection. Interior electrification. Design and execution. Conductors, conducts and boxes: dimensioned. Emergency installations. Communication installations. Residential and industrial project. *Pre-requisite: INE-302 Circuits II .*

CONTROL BLOCK

INE-303 Control Systems (5 Credits)

Regulation principles applied to lineal systems and servomechanisms. Transference function and localization of poles and zeros. Variables of state. Frequency, time and state analysis. Stability, Nyquist and Bode plotting, geometric place of the root method. Synthesis and compensation technique. Linearization. Alloy processes and statistical optimization of control systems (medium, quadratic and minimum error). Topics of analysis and design of automatic and self-regulating systems. *Pre-requisite: CBM-311 Mathematical methods for engineers, INE-302 Circuits II*

ING-323 LEGAL ASPECTS IN ENGINEERING:

Dominican legislation: History and development. Fundamental concepts of the Dominican Constitution, Labor Law and regulations, Tax obligations and formalities, Social Security and work accidents, Industrial health and safety, other laws applicable to work relations.

4 Credits/ Pre-Requisite: Must have taken 180 credits in the subject.



ELECTRONIC ENGINEERING COURSE

Electrical Circuits and Basic Electronics Block:

This block of contents will provide the student with basic knowledge about continuous current CC circuit analysis, and alternate current CA. In addition, basic knowledge and laboratory practice with electronic devices and circuits based on semi-conductors of 2 and 3 layers. The subjects in this block are as follows:

INE-301	Circuits I	5 Credits
INE-302	Circuits II	5 Credits

INL-313	Electronics I	5 Credits
INL-314	Electronics II	5 Credits

Digital Electronic Block: This block of contents enables the integration of theoretical and practical knowledge about digital electronics, the basics of hardware and operation of micro-processor based systems. The subjects in this block are as follows:

INL-315	Digital Electronics	5 Credits
INL-302	Digital Systems	5 Credits
INL-303	Micro-processors I	5 Credits
INL-324	Micro-processors II	5 Credits
INL-320	Micro-processor projects	4 Credits

Controls and Industrial Electronics Block:

This block of contents comprises of the subjects that will train the student to apply electronics in the industrial field. The orientation of this block centers on the theoretical and practical mastering of command and operation of industrial machinery, based on electronic circuits. The subjects in this block are as follows:

INE-303	Control Systems	5 Credits
INL-322	Power Electronics	5 Credits

Communications Block: This block will provide the student a combination of knowledge and abilities of electronic communications systems. In the same way as the previous blocks, this is structured in such a way that the student starts with the basics and goes on to the more complex aspects of electronic communications systems.

The contents of this block begin with the analysis of mathematical models that sustain communications, ensuring that each theme is backed up with practice. This is followed by the study of digital communications systems, in their different applications. Lastly, data networks are studied in all their extension, due to the development that telecommunications have undergone in this field.

All the subjects include laboratory use for better integration of knowledge. The subjects in this block are as follows:

INL-304	Circuits and Communication Systems	5 Credits
INL-316	Digital Signal Processing	4 Credits
INL-306	Digital Communications	5 Credits
INL-318	Advanced Communications Systems I	4 Credits

INI-314 Operative Research II (4 credits)

Study of stochastic models; model constructions; decision analysis; stock management models; the ABC method. Simulation models, Monte Carlo simulation, replacement analysis. Reliability, maintenance and renewal of equipment. Queue theory: distribution of arrival and service, one-channel systems, multi-channel systems, queue networks; cost minimization. Stochastic processes, Markov processes and chains; Poisson processes, asymptotes and stationary distribution systems. Laplace transform equations. *Pre-Requisite: INI-341 Operative Research I*

INI-304 Industrial Processes I (4 Credits)

Study of the basics of material processes; cutting, shavings formation, temperature of cutting, surface finish, lathing, milling, drilling, basics of smelting of metals, soldering. Basics of non-traditional processes; work processes in heat; work processes in cold; cutting materials; soldering using a blowtorch and arc. Processes related to machines, tools and molding. Manual and automated metal-mechanic processes.

Pre-Requisite: INC-327 Material Sciences, ING-208 Fluid Mechanics I

INI-331 Industrial Processes II (5 Credits)

Study of the production principles of manufacturing processes related to the following materials: glass, chemical products (paints, cosmetics etc.), plastics, agro-industrial and food technology processes, mining, fuel refining and power generation. Study of the principles of manufacturing processes related to the following materials: leathers, cellulose, wood, cotton, natural and synthetic fibers. At the first instance we will look at the following industrial branches: garments/apparel, shoes, furniture, printing and some metal-mechanical processes related to these. A strong component of practical work will take place in the University's laboratories and companies. This subject as well as the previous on the list require the coordination of a number of professional profiles combined with visits and close business sector contacts. It is proposed that this is complemented by the INTEC laboratories, other institutions and the business sector.

Pre-Requisite: INI-304 Industrial Processes I.

INI-307 Design of Production Systems I (4 Credits)

Theoretical and practical study of work measurement systems; time studies using direct observation, standard data, predetermined timescales and work samples. Method engineering; line balance; learning curves. Description and analysis of operations in industrial processes. Ergonomic basics. Concept of added value. Measuring productivity. Industrial Engineering tools for establishing and analyzing work processes and methods: Operational Diagrams, Flow and Process Diagrams, Right-hand/Left-hand Diagrams, Man-Machine Diagrams. Macroscopic focuses for improving productivity. Work station design. *Pre-Requisite: IND-335 Product Design and Development, INI-326 Evolution of Industrial Development, INI-341 Operative Research I*

INI-308 Design of Production Systems II (4 Credits)

Classification of industries. Indicators of industrial capacity. Study of techniques for localizing and distributing installations. Determining the space required. Internal distribution of physical space. Origin-Destination Diagrams; Travel Charting; Systematic Facility Planning. Types of Layout; types of production systems. Design of production lines. Using deterministic model techniques in planning facilities. Relation of activities. Modular production techniques. Analytical and computerized systems for solving real problems of industrial facility design. Industrial security: technical-scientific processes and the SI. Security regulations. *Pre-Requisite: INI-307 Design of Production Systems I, INM-300 Thermodynamics I*

INI-317 Design of Production Systems III (4 Credits)

Study of the operational needs of manufacturing systems, storage, dispatch, distribution and reception. Design of static and dynamic systems. Design and Management of Material Management Systems; manual and mechanized equipment. Intermittent work and continuous work. Flexible production. Production by work cells. Process flow. Organization, production and management styles. Warehouse design. Strategic Coordination of Facilities. Measuring improvements. Pioneering industrial organization methods. *Pre-Requisite: INI-308 Design of Production Systems II.*

INI-318 Design of Experiments (4 Credits)

Demonstrates the basic principles for the design and analysis of engineering experiments: ANOVA technique: factorial and confused experiments; design of complete and incomplete blocks; surface response method; fractional factorial design; alias structure; design of nested and divided parcel experiments; robust Taguchi design. Use of computer programs to analyze real data and develop experiment design. *Pre-Requisite: INI-310 Quality Control and 210 Credits passed.*

INI-309 Control of Production Systems and Inventories (4 Credits)

Analysis and design of production systems and inventories. Predicting demand. Development and implementation of programs for controlling production. Basic inventory principles and their models; methods for establishing and controlling inventories. Master Production Plan. Production by batch; production by orders. Calculation of economic batch. Administration of inventories, inventory models. Planning capacity of manufacturing plants, programming and resource allocation. Just in time; MRP. *Pre-Requisite: ECO-320 Macroeconomic topics, INI-301 Economic Engineering.*

IND-335 Product Design and Development (4 Credits)

Relevance of design in competitiveness. Creation cycle. The importance of creativity and innovation. Factors of relevance in determining designs. How to take an idea to the final stages. Design criteria. Relationship between design and manufacturing. Product engineering. Design as process. CAD/CAM systems. Software and hardware tools.

Preparation of design projects. Creating a prototype. *Pre-Requisite: IND-304 Economy and Human Factors*

INI-310 Quality Control (4 Credits)

Definition and analysis of the function of quality. Statistical control of the quality of processes. Measurement and analysis of quality costs. Quality policies and objectives. Quality regulations and specifications. Control of processes. Planning of manufacturing for quality. Control graphics for variables and attributes. Analysis and design of sampling plans for inspection. Statistical Process Control (CEP), Interpretation and use of military standards tables (MIL-STD), Prevention of defects. Pareto's analysis, Cause-Effect Diagram. *Pre-Requisite: INI-322 Tools for Quality*

INI-326 Evolution of Industrial Development (2 Credits)

Study of the main developments in the industrial sector since the XVIIth century, from the industrial revolution until the present time. Economic theories in the framework of production: Polanyi, Kalecki, Keynes, Robinson, Hicks, Schumpeter, Chandler, Porter, Best and others. Systems of mass production, by batch, flexible specialization, just in time, Toyota, drum-shock absorber-rope. The international context and its repercussions on the Dominican Republic. The import and internal industrialization substitution model. Liberalization and promotion of exports. Studies and discussion of paradigm cases. *Pre-Requisite: ING-201 Introduction to Engineering*

INM-337 Process Automation (4 Credits)

The role of technology in the creation and maintenance of continuous and intermittent systems. Use of controls and sensors: temperature, light-sensitive, electric and electronic. Use of pneumatic, hydraulic, electrical devices, etc. Mounting lines of loading, transport, packing, labeling, production and quality control. Preparation of a group project for presentation as a requisite for the subject with use of the Automation and Robotics Laboratory. *Pre-Requisite: must have passed 200 credits.*

INI-319 Industrial Engineering Project (4 Credits)

This consists of one project that integrates all types of tools, procedures and techniques learned during the study of this course. The idea is to implement the knowledge acquired in a specific case related to the country's industrial sectors.
Pre-Requisite: INI-317 Systems Production Design III.

MECHANICAL ENGINEERING

INM-300 Thermodynamic I (4 Credits)

Study of thermodynamics' principles and laws. Charts of thermodynamics' properties; Work and Heat; Sensitive heat; Latent heat; first law of thermodynamics; Carnot's Cycle; Entropy. *Prerequisite: CBF-202 PHYSICS II*

INC-327 Material Science (4 Credits)

Materials' properties, dynamics' properties, deformation, hardening, metal alloys; equilibrium diagrams; T-T-T diagrams, non-metallic materials. Materials and the environment. *Prerequisite: CBQ-202 Chemistry II, ING-206 Material Resistance I*

INM-303 Thermodynamic II (4 Credits)

Irreversibility and availability; Energy; thermodynamics' relationships; power cycle and cooling cycle; chemical reactions; gas dynamics, thermodynamics in the mixes; psychometrics. *Prerequisite: INM-300 Thermodynamic I*

INM-301 Mechanisms (4 Credits)

Connective bar movement transmission; flexible connections movement transmission; direct contact movement mechanisms; cinematic of gearings and levies. *Prerequisite: DYNAMICS (ING-207) Y DESCRIPTIVE GEOMETRY (ING-203)*

INM-317 Fluid Dynamics and Turbomachines (5 Credits)

Manometry: pressure measurement; flux measurement; measurement of the velocity of the fluids; dimensional analysis and dynamical similarity; laminar flow of compressible fluids; fluids on conduits; resistance; parallel and serial pipes; hydraulic circuits; compressible flux; turbomachines; pumps; ventilators; hydraulic turbines. *Prerequisite: ING-208 FLUID MECHANICS I*

INM-313 Heat Transference (5 Credits)

Heat transmission through conduction; heat transmission on a stable state; heat transmission through walls; thermal insulator; internal heat generation systems; wings; heat transmission on a convection state; heat exchangers; heat transmission through radiation; solar radiation; applications. *Prerequisite: INM-303 Thermodynamics II*

INM-318 Maintenance Systems Management (4 Credits)

Maintenance in the modern economy; maintenance systems projects; response management; labor management; maintenance improvement; work program preparation; programmed lubrication; preventive maintenance; corrective and programmed maintenance; maintenance system control and verification. *Prerequisite: 180 credits completed*

INM-309 Machine Design I (4 credits)

Work tensions; Materials fatigue limit; materials with fixed tension; materials with variable tension; security coefficient; Axes; Axes torsion; Springs, screws, belts, clutches and brakes. *Prerequisite: INC-306 MATERIAL RESISTANCE II*

INM-310 Machine Design II (4 credits)

Solder and rivet joints; Lubrication; Roller and ball bearing; Conical, straight and helical idal gearings; diverse machine elements. *Prerequisite: INM-309 MACHINE DESIGN I*

INM-311 Thermal Systems (4 credits)

Study of the power cycles with air and vapor; power thermal plants; internal combustion engines; gasoline and diesel engines; gas turbines; combined cycle; cogeneration; Energy economy and conservation; environment preservation. *Prerequisite: INM-313 HEAT TRANSFERENCE*

INM-312 Vibrations (4 credits)

Elements of a vibrating system; Vibrating movements; Vectorial representation of harmonic movements; One degree of freedom systems; Theory and applications; Systems with more than one degree of freedom; Natural frequencies; Discrete and continuous systems; Nonlinear systems; Computer-aided solutions. *Prerequisite: DYNAMICS ING-207*

INM-313 AUTOMATIC CONTROLS

Process control and measurement; Instruments to measure pressure, temperature, flow, deformation and velocity; Response and sensitivity; Analysis of electrical, electronic and pneumatic servomechanisms; Controllers; Amplifiers; Feedback; Control modules; Pneumatic valves; Command stations. *Prerequisite: FLUID DYNAMICS AND TURBODYNAMICS (INM-306)*

INM-314 Metallurgy (4 credits)

Industrial fusion of metals and alloys; Powder metallurgy; Manufacturing cemented carbides; Metal lamination; Lamination trenes; thermal treatment of metals and nonferrous alloys; New metals; Metallographic analysis. *Prerequisite: INC-327 MATERIAL SCIENCE*

INM-318 edifications climatization (4 credits)

Heat transmission through walls; cooling load calculation; Load through exterior walls; load on interior walls; load through windows; load by luminaries; load by people; equipment selection; Air distribution; Selection of lattices and diffusers; cooling towers. *Prerequisite: HEAT TRANSFERENCE (INM-307)*



MEDICINE

Biostatistics 4 Cr: Science based on mathematics, that analyses the occurrence of biological events and the application of data to biomedical investigations. This subject includes: key probabilities rules, measures of central tendencies, inferential statistics, and interpretation of information obtained for statistical purposes. *Prerequisite: Differential Calculus.*

Health related Research Methodology 4cr: here the students will understand the process of research and study design used in medicine and based on scientific methodology. The subject cover: history of research in medicine in the Dominican

Republic, use of inferential statistics, basic research structure and research presentation. Prerequisite: Scientific Development.

Biology I 4cr: studies all of the characteristics of the biological processes that occur in living organism. Also the subject includes a study of the correlation between structure and function of different biological components and the first program of research among students called Bio-Intec.

Chemistry I 5cr: this subject studies the structure and laws of transformation of matter. Provides specific knowledge of chemical properties of elements. Also students get to identify the use of chemistry in the real world by studying the properties of chemical bond, energy production and chemical reactions. Prerequisite: Differential Calculus.

Biology II 5cr: this is one of the milestones of the medical curriculum, here students have to present their first research project in a congress called Bio-Intec. This subject is based on teaching students all the processes involved in putting the results of a research together and being able to make a presentation. Also it covers the relationships between biology and all medical sciences.

Biophysics 4cr: covers all of the concepts on physics that are applied to health sciences.

Universal History and History of Cultures 4cr: it explains the origin of the world in the eyes of history, the evolution of human societies and their characteristics. The effect of each big civilization on today's world and detailed understanding of the present world and its dynamics.

Human Anatomy I 5cr: Head and Neck complete anatomical descriptions and explanations of all systems that are part of the human head. Prerequisite: Biology II.

Organic Chemistry 5cr: studies all the basic chemical reactions that take place as part of life, also there is detailed comprehension of organic reactions that are important as part of biochemical processes. Prerequisite: Chemistry II

Elective: 4cr subject that the student can freely pick among all subjects of the Human and Social studies faculty.

Dominican History 4cr: covers the most important events that took place in the Dominican Republic in the last 70 years. Because this subject is directed to MD students, it also covers the historic development of the Dominican health system in order to give the students the opportunity to know the environment in which they will work in the future.

Anatomy II 5cr: Thorax and Abdomen complete anatomical descriptions and explanations of all systems that are part of the thorax an abdomen. Prerequisite: Anatomy I

Biochemistry 4cr: covers all biochemical reactions and components. Also it covers and introduction of biochemical related pathologies. Prerequisite: Chemistry II

Embryology 4cr: functional description of all the transformation and fetal structure development that starts with conception. Prerequisite: Biology II

Histology 5cr: Microscopic study of all tissues that form normal organs in the human body. Prerequisite: Biology II

Biochemistry II 4cr: final biochemical projection of functional processes in normal and pathologic organisms. Prerequisite: Biochemistry I

History of Medicine 2cr: covers the development of medicine as science since the ancient cultures until today's world.

Parasitology 4cr: microscopic and macroscopic study of human diseases caused by parasites. Also the subject covers the treatment and prevention of endemic parasites. Prerequisite: Biology II

Anatomy III: 4cr: Upper and Lower limb and neuroanatomy complete anatomical descriptions and explanations of the most frequent clinical problems that presents in this area. Prerequisite: Anatomy II

Microbiology I 4cr: explain basic and general microbiology concepts, including bacteriology, virology and fungus world. Prerequisite: Biology II

Public Health and Epidemiology 5cr: statistical interpretation and managing of Dominican public health system, also the subject covers the natural history of diseases, prevention and transmission. Prerequisite: Microbiology II

Physiology I 5cr: covers the normal function of the human body, systems and organs. Prerequisite: Biochemistry II

Pathologic Basis of Disease I 4cr: covers pathological processes and microscopic abnormalities that identify each of them. Prerequisite: Anatomy II

Microbiology II 4cr: explain basic and general microbiology concepts, including bacteriology, virology and fungus world. It's a continuation of Microbiology I. Prerequisite: Microbiology I.

Genetics: studies the mechanisms involved in genetic inheritance and pathological processes related to it. Prerequisite: Biology II

Physiology II 5cr: covers the normal function of the human body, systems and organs. This is the continuation of physiology I. Prerequisite: physiology I.

Pathologic Basis of Disease II 4cr: covers pathological processes and microscopic abnormalities that identify each of them. This is the continuation of pathologic basic of disease I. Prerequisite: pathologic basic of disease I.

Physiopathology I 4cr: covers physiopathological alterations of organs and systems. Prerequisite: Physiology I.

Physiopathology II: covers physiopathological alterations of organs and systems. It is the continuation of physiopathology I. Prerequisite: physiopathology I.

Pharmacology 4cr: studies the pharmacokinetics, pharmacodynamics and most common used medications in medicine. Prerequisite: Biochemistry II, Physiology II.

Clinical Semiology 3cr: covers all signs, symptoms and syndromes as well as the techniques of clinical examination. Prerequisite: all of the above-mentioned subjects.

Surgical Semiology 4cr: study of the signs, symptoms, syndromes and physical examination techniques that give rise to the diagnosis of a surgical pathology. Prerequisite: all of the above-mentioned subjects.

Bioethics 2Cr. Fundamental principals of ethics applied to the medical field. Prerequisite: all of the above-mentioned subjects.

Surgical Pathology I 4 Cr: studies surgical disease with regards of diagnosis and treatment. Prerequisite: Clinical Semiology, Surgical Semiology and Physiopathology II.

Traumatology and Orthopedics 3cr: study of surgical semiology and pathology of eskeletal system. Prerequisite: Clinical Semiology, Surgical Semiology and Physiopathology II.

Infectious Diseases 4cr: study of a variety of contagious diseases caused by microorganisms. It also covers the therapeutic management and origin of infectious diseases. Prerequisite: Clinical Semiology, Surgical Semiology and Physiopathology II.

Inmunology 4cr: study of clinical entities of the reticular endothelial system. Covers: physiopathology and treatment of most common diseases. Prerequisite: Clinical Semiology, Surgical Semiology and Physiopathology II.

Imagenology 4cr: study and interpretation of diagnostics images studies. As an auxiliary diagnostic method. Prerequisite: Clinical Semiology, Surgical Semiology and Physiopathology II.

Pediatrics General Pathology 3cr: study of most common diseases in childhood. Prerequisite: Clinical Semiology, Surgical Semiology and Physiopathology II.

Pediatrics Infectious Pathology 3cr: study of the most common diseases caused by microorganisms. Prerequisite: Clinical Semiology, Surgical Semiology and Physiopathology II.

Neonatology 3cr: assesses the aspects that involve the healthy and sick newborn. Emphasizing on social and biologic characteristics of pregnancy. Prerequisite: Clinical Semiology, Surgical Semiology and Physiopathology II.

Growth and Development 3cr: study of biologic characteristics of the child during the growth process. Prerequisite: Clinical Semiology, Surgical Semiology and Physiopathology II.

Pediatrics Emergency and Therapeutics 3cr: study of the management of the most common pediatrics emergencies. Prerequisite: Clinical Semiology, Surgical Semiology and Physiopathology II.

Surgical pathology II 5cr: studies surgical disease with regards of diagnosis and treatment. This is a continuation of surgical pathology I. Prerequisite: Clinical Semiology, Surgical Semiology and Physiopathology II.

Human reproduction 3cr: studies the embryology and physiology of human reproduction. Prerequisite: Clinical Semiology, Surgical Semiology and Physiopathology II.

Introduction to Ob/Gyn pathology 3cr: general study of Ob/Gyn pathologies. Prerequisite: Clinical Semiology, Surgical Semiology and Physiopathology II.

Introduction to gynecologic pathology: studies the disease that affect the female reproductive system. Prerequisite: Clinical Semiology, Surgical Semiology and Physiopathology II.

Obstetrics pathology 4cr: studies all the general obstetric pathologies. Prerequisite: Clinical Semiology, Surgical Semiology and Physiopathology II.

Fertility 4 cr: studies all the pathologies that affect the process of conception. Prerequisite: Clinical Semiology, Surgical Semiology and Physiopathology II.

Electrocardiography seminar 2Cr: studies reading techniques and most common pathologies identified by an electrocardiogram. Prerequisite: Clinical Semiology, Surgical Semiology and Physiopathology II.

Cardiology 4Cr: studies the prevention and treatment of cardiovascular diseases. Prerequisite: Clinical Semiology, Surgical Semiology and Physiopathology II.

Nephrology 4 Cr: studies the semiology, prevention and treatment of the most common renal pathology. Prerequisite: Clinical Semiology, Surgical Semiology and Physiopathology II.

Rheumatology 2 Cr: studies the treatment and most common causes of immune and collagen diseases. Prerequisite: Clinical Semiology, Surgical Semiology and Physiopathology II.

Work related pathologies seminar 2 Cr: studies the prevention and treatment of work related pathologies. Prerequisite: Clinical Semiology, Surgical Semiology and Physiopathology II.

Clinical psychology 4 Cr: studies all of the psychological aspects of treating a patient. It also covers the most common psychological pathologies. Prerequisite: Clinical Semiology, Surgical Semiology and Physiopathology II.

Endocrinology 4 Cr: studies the hormone system and the control it has over human body processes. Prerequisite: Clinical Semiology, Surgical Semiology and Physiopathology II.

Nutrition and metabolism seminar 2 Cr: studies obesity, malnutrition and the importance of having balanced nutrition. Prerequisite: Clinical Semiology, Surgical Semiology and Physiopathology II.

Psychiatry 4 Cr: studies mental diseases and their treatment. Prerequisite: Clinical Semiology, Surgical Semiology and Physiopathology II.

Gastroenterology 4 Cr: studies the metabolic processes and pathologies of the GI tract. Prerequisite: Clinical Semiology, Surgical Semiology and Physiopathology II.

Toxicology 2 Cr: studies the prevention and treatment of the most common intoxications. Prerequisite: Clinical Semiology, Surgical Semiology and Physiopathology II.

Medical forensics seminar 2 Cr: studies the legal aspects and most common findings on the forensic field. Prerequisite: Clinical Semiology, Surgical Semiology and Physiopathology II.

Hematology 2 Cr: studies the blood, its component and their diseases. Prerequisite: Clinical Semiology, Surgical Semiology and Physiopathology II.

Neurology 5 Cr: studies the semiology, pathology and treatment of the most common diseases that affect the CNS. Prerequisite: Clinical Semiology, Surgical Semiology and Physiopathology II.

Oncology 3 Cr: studies the semiology and treatment of the most common malignancies. Prerequisite: Clinical Semiology, Surgical Semiology and Physiopathology II.

Pneumology 4 Cr: studies the semiology and treatment of the most common pulmonary diseases. Prerequisite: Clinical Semiology, Surgical Semiology and Physiopathology II.

Dermatology 3 Cr: studies the semiology and treatment of the most common skin diseases. Prerequisite: Clinical Semiology, Surgical Semiology and Physiopathology II.

Urology 4 Cr: studies the semiology and treatment of the most common urinary tract diseases. Prerequisite: Clinical Semiology, Surgical Semiology and Physiopathology II.

Neurosurgery 2 Cr: studies the semiology and surgical treatment of the most common CNS surgical diseases. Prerequisite: Clinical Semiology, Surgical Semiology and Physiopathology II.

Cardiovascular surgery 4 Cr: studies the semiology and surgical treatment of the most common cardiac surgical diseases. Prerequisite: Clinical Semiology, Surgical Semiology and Physiopathology II.

Otorhinolaryngology 2 Cr: studies the semiology and treatment of the most common ear nose and throat diseases. Prerequisite: Clinical Semiology, Surgical Semiology and Physiopathology II.

Ophthalmology 2 Cr: studies the semiology and treatment of the most common ocular diseases. Prerequisite: Clinical Semiology, Surgical Semiology and Physiopathology II.

Rehabilitation Seminar 2 Cr: studies the benefits of physical therapy and rehabilitation of the most common disabling disease. Prerequisite: Clinical Semiology, Surgical Semiology and Physiopathology II.

Anaesthesiology 2 Cr: studies the different anesthetics, their pre and post surgical action, as well as the most common used techniques. Prerequisite: Clinical Semiology, Surgical Semiology and Physiopathology II.

Clinical clerkships (5th year) 48 Cr: practical and theoretical application of all clinical concepts needed in the hospital environment. These rotations are: internal medicine, Ob/Gyn, Surgery and Pediatrics. They are each 9 weeks long with hospital work hours and calls
Prerequisite: all of the above-mentioned subjects.

Internal medicine 13 Cr: it consist of application of all clinical concepts involving internal medicine subspecialties, as well as an intensive training in the internal medicine wards, outpatient clinic and internal medicine emergency room.

Ob/Gyn 13 Cr: it consist of application of all clinical concepts involving the obstetrics and gynaecologic practice, as well as an intensive training in the Ob/Gyn wards, outpatient clinic and labor and delivery room.

Surgery 13 Cr: it consist of application of all clinical concepts involving surgical subspecialties, as well as an intensive training in the surgical wards, operating room, and surgery emergency room.

Paediatrics 13 Cr: it consist of application of all clinical concepts involving all paediatrics subspecialties, as well as an intensive training in the paediatric wards, outpatient clinic and paediatric emergency room.

BUSINESSES [FORMATIVE CYCLE]

The Formative Cycle of Businesses seeks to provide the students with a basic solid formation in the area of businesses and of social sciences that will allow them to specialize in a discipline, without losing the group vision that gives them that multidisciplinary formation in businesses in this stage of its education, with special attention to the social aspect, at the same time that prepares them to integrate and to generate changes with a global coherent conscience with the socioeconomic new realities.

In a more precise way, the Formative Cycle of the Area of Businesses intends to contribute to develop a professional that:

- ✓ Know, analyze and understand in general the society, and in a particular way the Dominican.
- ✓ Have a solid preparation in the basic disciplines of the Area of Businesses, supplemented with a social-humanistic formation.
- ✓ Know and use the technology of the information applied to the businesses.
- ✓ Know and apply investigation methodologies in the businesses.

The Formative Cycle is conformed by an average of 22 subjects with an average load of 83 credits, dyeing the plan of studies from the third trimester up to the eighth inclusive.

In the next chart you will be able to observe the block of subjects of the Formative Cycle of Businesses.

LEVEL	SUBJECTS	CRS
CSG-204	Social Anthropology	4
CBM-204	Descriptive statistic	4
INS-200	Computer Science in the Businesses*	5
CBM-200	Integral Calculus for Businesses	5
CBM-205	Statistical Analysis	4
CSG-201	History of the Civilizations and Cultures	4
CSG-209	Introduction to the Psychology	4
ADM-F01	Elective of Natural (Sciences)**	4
MER-201	Marketing Principles	4
CSG-208	Social Investigation	4
CON-211	Financial Accounting I	5
ECO-201	Principles of Micro-economy	4
CON-212	Administrative Accounting	4
ECO-202	Macroeconomics Principles	4
ADM-201	Management Principles	4
ADM-F02	Elective of Humanities	4
ADM-202	Organizational Behavior	4
CSG-202	Dominican Social-historical Processes	4
ADM-203	Communication in the Businesses I	2
ADM-204	Communication in the Businesses II	2
ADM-F03	Open elective I (Open Elective located in the professional cycle)	4
ADM-F04	Elective Open II (Open Elective located in the professional cycle)	4
	* This subject requires laboratory ** It could require laboratory	86
-Open Elective ^{1,2} : The Student will take two (2) Electives of other areas but Businesses. These electives are located in the Professional Cycle although they are of formative level or 200.		

BUSINESSES ADMINISTRATION

INS-200 Computer Science in the Businesses (5 credits)

The focus of this subject consists on initiating the students in the learning of different applications linked to the businesses. This course contemplates, to teach by means of theory and laboratory practice, the general aspects on the handling of operating systems, word processors, electronic sheets, databases, generators of graphics or presentations, Internet, among other elements as well as emphasis will be made in the

principles and abilities in programming using the tools of Visual Basic. *Pre-requirement: CBM-101 Algebra and Analytic Geometry*

CON-211 Financial Accounting I (5 credits)

Intensive study of the different evolutionary stages of the Accounting and preparation of the countable cycle. The fundamental equation of the Accounting. Definition and meaning of assets, passive and patrimony of a company, as well as expenses and income to determine the utility or loss of a certain period, by means of the analysis and record of the transactions in the different diaries of the organizations.

ADM-201 Management Principles (4 credits)

This course provides an introduction to the managerial basic functions of planning, organization, direction and control. The course also covers aspects related with organizational change, stress, productivity and decisions making.

Pre-requirement: CSG-209 Introduction to the Psychology

ADM-202 Organizational Behavior (4 credits)

This subject covers in a general way the behavior of the individuals in the organizations with the objective of increasing its personal and organizational effectiveness. The course makes emphasis in topics or aspects like: teamwork, work teams, motivation, communication, leadership, solution of conflicts and negotiations, organizational structures, positions design, power and political behavior.

Pre-requirement: ADM-201 Management Principles

ADM-203 Communication in the Businesses I (2 credits)

This course introduces the technical and fundamental aspects of an effective communication of businesses with emphasis in the writing of commercial letters, memos and reports. Great consideration is given to the gathering of data and organization of materials for the presentation of reports. The course also presents the importance of the psychological aspects wrapped in the modern relationships of businesses. In this course they will also cover aspects related with the resume preparation, and it culminated with the preparation of the resume of the participants in the course. The student will be introduced to the oral communication and management of the scenic fear, therefore a great part of the written and oral works will be presented.

Pre-requirement: ADM-201 Management Principles

ADM-204 Communication in the Businesses II (2 credits)

This course is a continuation of the previous course, but with emphasis in oral presentations and speeches. It will cover such aspects as abilities in meetings, handling of the time, ability to listen and to synthesize, design, preparation and handling of helps

and audiovisual teams. Emphasis will be made in the aspects related with the image reflected by the individuals, the handling of conversations and work interviews.

Pre-requirement: ADM-201 Communication in the businesses I

ADM-305 Principles of Finances (4 credits)

This is an introductory course that covers the basic concepts essentials for the comprehension and understanding of the aspects related with the financial management. The topics to try in this course include rating models, analysis of financial states, operational leverage, financial leverage, capital budget, cost and capital handling.

Pre-requirement: CON-212 Administrative Accounting

ADM-301 Management of Human Resources (4 credits)

This course introduces the concepts and techniques of human resources with emphasis in the outstanding knowledge to the management practices. The topics to try include strategic planning of the human resources, system of information of HHRR, recruitment and selection, work interviews, compensation and benefits, programs of incentives, evaluation of personal, training and development. They will also cover topics like labor relationships, counseling, coaching, career plan and ethical and legal aspects in human resources.

Pre-requirement: ADM-201 Management Principles

ADM-302 Quantitative Methods for Businesses (4 Credits)

This course is oriented to the use of mathematical tools and their application to the businesses. It provides a conceptual understanding of how these tools can be used for the solution of problems and decisions making. Some of the topics to try include: analysis of decisions, utility and decisions making, lineal programming, problems of transport, programming of projects, inventory administration, queue models, processes of Markov, simulation and problems of decisions and multiple objectives.

Pre-requirement: CBM-102 Differential Calculus, CBM-205 Statistical Analysis, INS-200 Computer science in the Businesses.

ADM-303 Labor Legislation (4 Credits)

Introductory course that provides the basic knowledge related with the active labor legislation as well as an orientation to the origin of the discipline of the Right of the Work. This course will cover topics like the work contracts, the employees' obligations and employers, aspects related with wages, working day, overtimes, suspensions, terminations and labor benefits.

Pre-requirement: ADM-301 Management Human Resources

ADM-306 Commercial Legislation (4 credits)

A study of the fundamental principles that regulate the Commercial Laws. It relates and documents the students with a series of terms, concepts and juridical figures

characteristic of this legislation. Some of the topics to try include trade activities, merchants' obligations, the commercial societies, trade effects.

Pre-requirement: ADM-201 Management Principles.

ADM-304 Technological Management (2 credits)

This course studies the means and opportunities of how the technology, in a general way and the technology of information, in specific, can contribute to the development of the competitive advantage of an organization inside their competitive environment or to be the support itself of this. This course will also cover the main aspects, tools and technological advances impacting or contributing in the businesses.

Pre-requirement: ADM-201 Management Principles, INS-200 Computer Science in the Businesses.

ADM-310 Quality and Service to the Client (4 credits)

An exhibition to the concepts of quality and their implications at personal and organizational level in a competitive atmosphere. This subject covers aspects related with the history and principles of the movement, as well as of the aspects related with the offer of a service of quality and the satisfaction of the clients. The course will make emphasis in the development of abilities of service to the client through study of cases, simulations, and role games.

ADM-307 Production Management and Operations (5 credits)

This course provides the participants with an understanding of the concepts, techniques and applications used in the management of operations and production. It prepares the students for the dynamic world of the businesses and it is presented as the function of operations and the technology that can be used indeed to improve the productivity, the quality and the competitive position of the company. Some of the topics to try include: Production processes, design of products and processes, forecasts, administration of inventories, administration of the productivity and the quality, supplies network, strategies of operations, added planning, planning of the requirements of materials, among other.

Pre-requirement: ADM-302 Quantitative Methods for Businesses

ADM-309 Formulation and Evaluation of Projects (4 Credits)

Directed to students interested in carrying out investment projects to determine their financial viability. This integrative course first focused in covering the theoretical aspects related with the investment, and second, to make the way to orchestrate the realization of an investment project.

Pre-requirement: ADM-305 Principles of finances, ADM-307 Management of Production and Operations, MER-201, Marketing Principles.

ADM-311 Strategic Management (4 credits)

This course allows the development of a general and integrated point of all the functional areas of the organization. The topics to try include analysis of the different environments, strategic groups, base of the competitive advantage, competitiveness in a globalize world, adjustment strategies to the social environment, politics and economic, concepts of the generic strategy. Forms of to develop and to implement a strategic plan. *Pre-requirement: ADM-305 Principles of Finances, ADM-307 Management of Production and Operations, MER-201, Marketing Principles.*

ADM-308 International Businesses (4 credits)

An analysis of the main topics confronted by the companies making businesses around the world. The course will make emphasis in the aspects related with the opposing cultural and practical differences of businesses around the world. Also, the impact that those factors have in managerial aspects, individuals, groups, an in the execution of the company are going to be examined. The course will play topics like styles of leadership, communication, negotiation, risk tolerance and motivation in a multicultural context.

Pre-requirement: ADM-202 organizational Behavior, ADM-305 Principles of Management, MER-201, Marketing Principles.

CHH-302 Ethics and Social Responsibility in the Businesses (4 Credits)

This course examines the most important morals and ethical theories of the western world and its implications in the businesses. The topics will be related to studies of cases in the areas of social responsibility, introduction of new technologies, corruption or to practical of businesses in other cultures.

Pre-requirement: To have approved 170 credits.

ADM-312 Internship of Administration of Companies (5 Credits)

With this subject, the students culminate their studies, and consist of two parts. The first are to provide the students with certain labor experience that allows them to appreciate and to be linked with aspects of their career. The second are the elaboration of a final work or project where the student integrates what they have learned during her studies in INTEC.

Pre-requirement: ADM-311 Strategic Management.

INTRODUCTION TO THE BUSINESSES (4 credits)

This is an introductory course that presents a general framework of the dynamic world of the organizations of businesses. It presents in an integrated way as the different disciplines of businesses and functional areas of the company contribute to the effectiveness and competitiveness of the same one. Among the topics to be treated: introduction of the functions and impacts that the following topics have with the businesses: the economy, accounting, finances, marketing, administrative, operations, technology, social, legal, ethical, cultural and global aspects.

Pre-requirement: None

SYSTEM OF MANAGERIAL INFORMATION (4 credits)

The focus of this subject is the planning, design and implementation of systems of decisions based on computers. They will cover concepts and applications of handling of behavioral and economic aspects of design and installation of systems.

Pre-requirement: Management Principles, Computer Science in the Businesses

ENTREPRENEURS AND CREATION OF COMPANIES (4 credits)

Course focused to foment the enterprising spirit. The students worked in the development of the knowledge and technical necessary abilities for the handling of a company, and they will work in the creation of a company project.

Pre-requirement: Introduction to the Businesses or Management Principles

ADVANCED TOPICS OF MANAGEMENT (4 credits)

Course where the most outstanding topics and tendencies of the moment will be discussed in the management area. This course also allows the participants to deepen in topics of special interest and/or to work in private projects of studies or investigation. All the participants will give a document or final work of the treated thematic.

Pre-requirement: Organizational Behavior

WORKSHOP OF ABILITIES AND MANAGERIAL PRACTICES (4 Credits)

This instrumental course is designed for students that are not of Businesses, but that they need or they are interested in learning in a practical way, what the administrators or managers performed in the exercise of their functions. In this course the students will be exposed to the concepts related with the portrayal and abilities that should have a manager, and then it will analyze and to put into practice this abilities.

Pre-requirement: Introduction to the Businesses

WORKSHOP OF APPLIED MANAGEMENT (4 credits)

This course of instrumental and integrative character is centered in the application of the knowledge learned during the career. The participants formed managerial teams which worked in the solution of problems, and/or they will compete to each other in games of simulation of businesses. The course also concentrated on the development of individual managerial abilities but inside a frame of work teams.

Pre-requirement: Strategic Management

RECRUITMENT AND SELECTION (4 credits)

This course identifies the recruitment processes, selection and it explains how these they are important for the future performance of the candidate and the company. In this course the main roll played by a series of processes that impact the productivity of the company are analyzed. The course will facilitate the application of the recruitment processes, selection and evaluation of personal, as tools in the provision, development and maintenance of effective human resources in the organizations.

Pre-requirement: Management of Human Resources

QUALIFICATION AND DEVELOPMENT OF PERSONAL (4 credits)

The first objective of this course is to introduce the aspects related with the design process and execution of programs of training, including the process of evaluation of the necessities that originate the same one. The second objective tries about the design and implementation of processes and systems that facilitate the individual development of the members of an organization.

Pre-requirement: Management of Human Resources

ADVANCED WORKSHOP OF HUMAN RESOURCES (4 credits)

Advanced course in Humans Resource where the most outstanding topics and tendencies of the moment in that field will be discussed. This course also allows the participants to deepen in topics of special interest and/or to work in private projects of studies or investigation. All the participants will give a document or final work of the treated thematic.

Pre-requirement: Management of Human Resources

FINANCIAL MARKETS (4 credits)

This course is an exam of the Dominican financial system, making emphasis in the importance of the financial markets, financial documents and the participants in that market. The course also focuses the factors that influence the level and structure of the interest rate, including actions of monetary politics and regulations. In this course several analysis models and fixation of prices of various financial instruments are treated.

Pre-requirement: Principles of Finances

POLITICAL AND FINANCIAL STRATEGIES (4 credits)

This course is a continuation of Financial Management, which is focused in analysis of financial states and about some financial and investment decisions of the company. Among the topics to try are: financial analyses, measures of risk, capital budget, structures of capital, decisions and dividend politics.

Pre-requirement: Principles of Finances

ADVANCED WORKSHOP IN FINANCES (4 credits)

Advanced course that integrates the concepts and tools learned in the previous courses of finances and where the most outstanding topics and tendencies of the moment in that field will be discussed. This course also allows the participants to deepen in topics of special interest and/or to work in private projects of studies or investigation. All the participants will give a document or final work of the treated thematic.

Pre-requirement: Principle of Finances

MER-201 Marketing Principles

(4 credits)

This subject provides the student a general vision, without arriving at a level of specificity, of the main concepts and topics of the marketing. It includes the treatment of such topics as the historical evolution of the marketing, marketing and analysis of the environmental variables, marketing segmentation, positioning, the psychology of the consumer, systems of marketing information and the elements of the marketing mix.

Pre-requirement: CSG-209 Introduction to the Psychology

ECO-201 Principles of Micro-economy

(4 credits)

This subject embraces the essential concepts of the market, economy, demands, offer, decisive factors of the demand and offer. Different types of markets, perfect Competition. Elasticity price of the demand. Types of elasticity. In general sense the micro-economic theory applied to the companies.

Pre-requirement: CBM.101 Algebra and Analytic Geometry.

ECO-202 Macroeconomics Principles

(4 credits)

This subject contemplates all the related to the general economic aggregates that impact in the economy of a country. Consumption, investment, savings. The added demand, inflation and unemployment. The public debt, management of the budgetary deficit. The National Accounts and measurement of the National Rent.

Pre-requirement: CBM-101 Algebra and Analytic Geometry.

CON-212 Administrative Accounting

(4 Credits)

This subject approaches the topics related with the determination of the structure of costs of the companies, high and low point methods, regression and funding based on activities for the making of decisions.

Pre-requirement: CON-211 Financial Accounting I.

CON-305 Managerial Budget

(4 Credits)

This subject understands the process that is followed to elaborate the plan of utilities of short, medium and long term of the public and private companies. Types of budgets and their importance. Budget of sales, production and of investment. The financial states projected as final product of the budgetary process.

Pre-requirement: CON-212 Administrative Accounting.



ACCOUNTING

INS-200

Computer Science in the Businesses

(5 credits)

The focus of this subject consists on initiating the students in the learning of the different packages and tools of programs, that are applicable to the businesses. This course contemplates, to teach by means of theory and practice of Laboratory, the general aspects on the handling of operating systems, word processors, electronic sheets, databases, generators of graphics or presentations, Internet, among other elements.

Pre-requirement: CBM-101 Algebra and Analytic Geometry

ADM-201 Management Principles (4 Credits)

This course provides an introduction to the managerial basic functions of planning, organization, address and control. The course also covers aspects related with organizational change, stress, productivity and decisions making.

Pre-requirement: CSG-209 Introduction to the Psychology

ADM-202 Organizational Behavior (4 Credits)

This subject covers in a general way the behavior of the individuals in the organizations with the objective of increasing its personal and organizational effectiveness. The course makes emphasis in topics or aspects like: teamwork, work teams, motivation, communication, leadership, solution of conflicts and negotiations, organizational structures, position design, power and political behavior.

Pre-requirement: ADM-201 Management Principles

ADM-203 Communication in the Businesses I (2 Credits)

This course introduces the technical and fundamental aspects of an effective communication of businesses with emphasis in the writing of commercial letters, memos and reports. Great consideration is given to the gathering of data and organization of materials for the presentation of reports. The course also presents the importance of the psychological aspects wrapped in the modern relationships of business. In this course they will also cover aspects related with the resume preparation, and it culminated with the preparation of the resume of the participants in the course. The student will be introduced to the oral communication and the management of the scenic fear, therefore a great part of the works so much written as oral will be presented.

Pre-requirement: ADM-201 Management Principles

ADM-204 Communication in the Businesses II (2 Credits)

This course is a continuation of the previous course, but with emphasis in oral presentations and speeches. In this course they will cover aspects like they are it abilities in meetings, handling of the time, ability to listen and to synthesize, design, preparation and handling of helps and audiovisual equipment. Emphasis will also be made in the aspects related with the image reflected by the individuals, the handling of conversations and work interviews.

Pre-requirement: ADM-203 Communication in the Businesses I

ADM-305 Principles of Finances (4 Credits)

This is an introductory course that covers the essential basic concepts for the comprehension and understanding of the aspects related with the financial management. The topics to try in this course include rating models, analysis of financial state, operational leverage, financial leverage, capital budget, cost and capital handling.

Pre-requirement: CON-210 Accounting of Costs I

ADM-301 Management of Human Resources (4 credits)

This course introduces the concepts and techniques of human resources with emphasis in the outstanding knowledge to the management practice. The topics to try include strategic planning of the human resources, system of information of HHRR, recruitment and selection, work interviews, compensation and benefits, programs of incentives, evaluation of personal, training and development. They will also cover topics like labor relationships, counseling, coaching, career plan and ethical and legal aspects in human resources. Exam of the administrative functions in the field of the human resources: analysis of positions, recruitment and selection, training and evaluation, motivation systems and incentives and labor relationships.

Pre-requirement: ADM-201 Management Principles

ECO-201 Principles of Micro-economy (4 credits)

This subject embraces the essential concepts of the market, economy, demands, offer, decisive factors of the demand and offer. Different types of markets, perfect Competition. Elasticity price of the demand. Types of elasticity. In general sense the micro-economic theory applied to the companies.

Pre-requirement: CBM-101 Algebra and Analytic Geometry

ECO-202 Macroeconomics Principles (4 credits)

This subject contemplates all the related to the general economic aggregates that impact in the economy of a country. Consumption, investment, savings. The added demand, inflation and unemployment. The public debt, management of the budgetary deficit. The National Accounts and measurement of the National Rent.

Pre-requirement: CBM-101 Algebra and Analytic Geometry

ADM-303 Labor Legislation (4 credits)

Introductory course that provides the basic knowledge related with the active labor legislation as well as an orientation to the origin of the discipline of the Right of the Work. This course will cover topics like the work contracts, obligations of the employees and employers, aspects related with wages, days, overtimes, rest, suspensions, terminations and labor benefits.

Pre-requirement: ADM-301 Management of Human Resources

ADM-306 Commercial Legislation (4 credits)

A study of the fundamental principles that regulate the Commercial Laws. It relates and documents the students with a series of terms, concepts and juridical figures characteristic of this legislation. Some of the topics to try include trade activities, obligations of the merchants, the commercial societies, trade effects.

Pre-requirement: ADM-201 Management Principles

CON-211 Financial Accounting I (5 credits)

An intensive study of the evolutionary different stages of the Accounting and preparation of the countable cycle. The fundamental equation of the Accounting. Definition and meaning of active, passive and Patrimony of a company, as well as expenses and revenues to determine the utility or loss of a certain period, by means of the analysis and registration of the transactions in the different diaries of the organizations.

CON-311 Financial Accounting I (5 credits)

Continuation of the intensive study of the countable cycle; preparation of financial states. Measurement of Inventories, methods of Depreciation, credit Sales, Refunds.

Pre-requirement: Financial Accounting I.

CON-210 Accounting of Costs I (4 credits)

A study of the different systems of costs and of the elements that compose it, raw materials, direct manpower and indirect expenses of production. To establish the difference among financial accounting and of costs in the factory companies, to planning and to control this costs, in such a way that contribute to the continuous improvement and the increment in the utilities.

Pre-requirement: CON-211 Financial Accounting I.

CON-313 Accounting of Costs II (4 credits)

Training in the accounting of a system of costs for processes and in the installation of a system of costs. Production flow and their importance in the industry. Establish advantages and disadvantages in the funding techniques of the companies. Analysis of variations of the production costs and their importance.

Pre-requirement: CON-210 Accounting of Costs I.

ECO-310 Public Finances (4 credits)

A study of the mechanisms that allow to the State to obtain revenues and the distribution of the public expense; analysis of the effect that these cause in the national economy. Characteristic of the taxes, Multiplier of the public expense, impact in the consumers. Regressive, progressive and marginal taxes. Theories of the public expense.

Pre-requirement: CON-321 Taxes

CON-318 Audit I (4 credits)

A study of the responsibilities and the functions of the public accountant, of the norms and general principles of the audit and of the elaboration of work papers. The ethics and the Auditor. Types of audits. The internal and external Auditor and their importance for credibility of the administration. The external Auditor and their paper in the financial information for the making of decisions.

Pre-requirement: CON-311 Financial Accounting II.

CON-319 Audit II (4 credits)

A study of the different types of verdicts and the importance of their preparation in the companies. Professional ethics. Legal responsibility of the auditor. (Law 633 Decree 2032). International norms of Accounting. National and international organism of Audit and Norms of Audit. The Auditor and the frauds or illegal acts. Confidentiality and conflict of interests.

Pre-requirement: CON-318 Audit I

CON-316 System of Countable Information (4 credits)

A study of the methodologies for the analysis and design of an accounting system in a company. Types of controls. Internal control and their importance. Designs of systems to prevent frauds and errors. Characteristic of an internal control.

Pre-requirement: CON-311 Financial Accounting II

CON-314 Financial Mathematics (4 credits)

A study of the methods based on the arithmetic, the algebra and the statistic for the gathering of information and resolution of problems of financial type in a company. Interest rates, methods of calculations. Gradients. Periods of payments. Nominal and effective rate. Amortizations and periods of payments.

Pre-requirement: CBM-101 Algebra and Analytic Geometry.

ADM-316 Advanced Finances (4 credits)

Training in the financial long term management as well as in the evaluation and use of the financial resources for the making of decisions. Introduction to the Investment, Management of portfolio, financial instruments of long term.

Pre-requirement: ADM-305 Principles of Finances.

CON-305 Managerial Budget (4 credits)

To understand the process that is followed to elaborate the plan of utilities of short, medium and long term of the public and private companies. Types of budgets and their importance. Budget of sales, production and of investment. The projected financial states as final product of the budgetary process.

Pre-requirement: CON-210 Accounting of Costs I.

CON-320 Analysis of Financial States (4 credits)

Training in the analysis and interpretation of contained information in the basic financial states of the companies and to carry out pertinent recommendations. Basic financial indicators, methods of analysis of the financial States.

Pre-requirement: CON-311 Financial Accounting II.

CON-323 Internship in Accounting (5 credits)

Final report on the study of the financial information in the companies and their impact in the making of decisions, as well as Practices supervised in departments and accounting offices.

Pre-requirements: CON-305 Managerial Budget, CON-320 Analysis of Financial States.

CON-322 Specialized Accounting (4 credits)

Training in the handling and the obtaining of the financial basic reports in: a bank, an insurance company and in the institutions without lucrative ends. Products and bank services and their registration. Annotations in the Accounting of funds.

Pre-requirement: To have approved 170 credits of the Career and CON-311 Accounting of Costs II.

CON-321 Taxes (2 credits)

Training in the application of the tax laws that affect the companies and physical people of the Dominican Republic. Taxable income, Application of the tributary code. The personal rent, types of obligations.

Controllership (4 credits)

Application of the countable technique in the analysis and revision of the expenses and the revenues of the government and their handling according to the politics and the procedures of the government. Cash Flow Analysis and their importance in the companies.

Pre-requirement: Audit I and II.

MARKETING

INA-200 Computer Science in the Businesses (5 credits)

The focus of this subject consists on initiating the students in the learning of the different packages and tools of programs that are applicable to the businesses. This course contemplates, to teach by means of theory and practice of Laboratory, the general aspects on the handling of operating systems, word processors, electronic sheets, databases, generators of graphics or presentations, Internet, among other elements.

Pre-requirement: CBM-101 Algebra and Analytic Geometry

MER-201 Marketing Principles (4 credits)

This subject provides the student a general vision, without arriving at a level of specificity, of the main concepts and topics of the marketing. The same one includes the treatment of such topics as the historical evolution of the marketing, marketing and analysis of the environmental variables, marketing segmentation, positioning, the psychology of the consumer, systems of marketing information and the elements of the marketing mix.

Pre-requirement: CSG-209 Introduction to the Psychology

CON-211 Financial Accounting I (5 credits)

This subject contemplates the intensive study of the evolutionary different stages of the Accounting and the preparation of the countable cycle. The fundamental equation of the Accounting. Definition and meaning of active, passive and Patrimony of a company, as well as expenses and revenues to determine the utility or loss of a certain period, by means of the analysis and registration of the transactions in the different diaries of the organizations.

Pre-requirement: To have completed the Propedeutic Cycle.

ECO-201 Principles of Micro-economy (4 credits)

This subject embraces the essential concepts of the market, economy, demands, offer, decisive factors of the demand and offer. Different types of markets, perfect Competition. Elasticity price of the demand. Types of elasticity. In general sense the micro-economic theory applied to the companies.

Pre-requirement: CBM-101 Algebra and Analytic Geometry.

MER-202 Behavior of the Consumer (4 credits)

Through this subject the student will develop an understanding of the motivations and behaviors, as well as of the mechanisms involved in the decision making of the consumers in the process of purchase of goods and services. It is included the analysis of aspects like the psychology of the consumer like discipline, the process of making of decisions, the personality and other psychological features and their influence in the purchase decision and selection of products and trademarks, learning processes, the communication and the persuasive message, the influences of the social groups, among other related topics.

Pre-requirement: MER-201 Marketing Principles.

CON-212 Administrative Accounting (4 credits)

This subject approaches the topics related with the determination of the structure of costs of the companies, high and low point methods, regression and funding based on activities for the making of decisions.

Pre-requirement: CON-211 Financial Accounting I.

ECO-202 Macroeconomics Principles (4 credits)

This subject contemplates all the related to the general economic aggregates that impact in the economy of a country. Consumption, investment, savings. The added demand, inflation and unemployment. The public debt, Management of the budgetary deficit. The National Accounts and measurement of the National rent.

Pre-requirement: CBM-101 Algebra and Analytic Geometry.

ADM-201 Management Principles (4 credits)

This course provides an introduction to the managerial basic functions of planning, organization, address and control. The course also covers aspects related with organizational change, stress, productivity and making of decisions.

Pre-requirement: CSG-209 Introduction to the Psychology

ADM-203 Communication in the Businesses I (2 credits)

This course introduces the fundamental aspects and techniques of an effective communication of businesses with emphasis in the writing of commercial letters, memos and reports. Great consideration is given to the gathering of data and organization of materials for the presentation of reports. The course also presents the importance of the psychological aspects wrapped in the modern relationships of business. In this course they will also cover aspects related with the resume preparation, and it culminated with the preparation of the resume of the participants in the course. The student will be introduced to the oral communication and the management of the scenic fear, therefore great part of the works so much written as oral will be presented.

Pre-requirement: ADM-201 Management Principles.

MER-301 Logistics and Distribution Channels (4 credits)

The subject seeks to promote in the student the integration of the necessary knowledge to set a global perspective, on the management of the distribution and the logistics, inside the strategy of marketing of a company; combining outstanding aspects to create a competitive advantage that assures the delivery of goods and services in the place, time, quantity, forms and opportune conditions. Among the aspects to stand out are: functions of the channels, structure, selection of channels, systems and means of transport, analysis of the systems of local and international distribution, distribution strategies, handling of conflicts, legal aspects, merchandising, costs of the distribution. The aspect is analyzed with respect to the management of the logistics, making emphasis in critical functions as the optimization of the transport, location and storage.

Pre-requirement: CON-212 Administrative Accounting, MER-202 Behavior of the Consumer.

ADM-202 Organizational Behavior (4 credits)

This subject covers in a general way the behavior of the individuals in the organizations with the objective of increasing its personal and organizational effectiveness. The course makes emphasis in topics or aspects like: teamwork, work teams, motivation, communication, leadership, solution of conflicts and negotiations, organizational structures organizational, position design, power and political behavior.

Pre-requirement: ADM-201 Management Principles.

ADM-204 Communication in the Businesses II (4 credits)

This course is a continuation of the previous course, but with emphasis in oral presentations and speeches. In this course they will cover aspects like they are it abilities in meetings, handling of the time, ability to listen and to synthesize, design, preparation and handling of helps and audiovisual equipments. Emphasis will also be made in the aspects related with the image reflected by the individuals, the handling of conversations and work interviews.

Pre-requirement: ADM-203 Communication in the Businesses I.

MER-302 Investigation of Market (5 credits)

This subject is about familiarizing the students with the concepts and methodological tools of the market investigation. The following topics are emphasized: nature of market investigation, systems of information in marketing, design of the market investigation, the obtaining of information and the types of data, techniques of the data gathering, the sampling, measurement scales, the field and experimental investigation in marketing.

Pre-requirement: MER-202 Behavior of the Consumer, CSG-208 Social Investigation.

ADM-302 Quantitative Methods for Businesses (4 credits)

This course is oriented to the use of mathematical tools and their application to the businesses. It provides a conceptual understanding of how these tools can be used for the solution of problems and decision making. Some of the topics to try includes: Analysis of decisions, utility and making of decisions, lineal programming, problems of transport, programming of projects, inventory administration, queue models, processes of Markov, simulation and problems of decisions and multiple objectives.

Pre-requirements: CBM-200 Integral Calculation for Businesses, CBM-205 Statistical Analysis, INS-200 Computer Science in the Businesses.

CON-305 Managerial Budget (4 credits)

This subject understands the process that is followed to elaborate the plan of utilities of short, medium and long term of the public and private companies. Types of budgets and their importance. Budget of sales, production and of investment. The financial states projected as final product of the budgetary process.

Pre-requirement: CON-212 Administrative Accounting.

ADM-301 Management of Human Resources (4 credits)

This course introduces the concepts and techniques of human resources with emphasis in the outstanding knowledge to the management practice. The topics to try include strategic planning of the human resources, system of information of HHRR, recruitment and selection, work interviews, compensation and benefits, programs of incentives, evaluation of personal, training and development. They will also cover topics like labor relationships, counseling, coaching, career plan and ethical and legal aspects in human resources.

Pre-requirement: ADM-201 Management Principles.

MER-303 Marketing of Services (4 credits)

In this subject the student will apply the elements from the marketing mix to the design and implementation of market plans for organizations of services (banks, communication companies, transport, etc.) The topics to try include introduction to the marketing of services, key differences between goods and services, analysis of the

environmental variables, marketing audits for organizations of services, segmentation and design of strategies in the market of services.

Pre-requirement: MER-201 Marketing Principles, ADM-204 Communication in the Businesses II.

MER-304 Integrated Communication of Marketing (4 Credits)

This subject seeks to provide the student a general conceptual frame on the communication strategy and how this impacts in the marketing plan. The reach includes the analysis of the communication mix: publicity, promotion of sales, public relationships, personal sales and publicity; discussions on the use of the traditional means and of the Internet, communication budget and the planning and monitoring of the general strategy of communication.

Pre-requirement: MER-201 Marketing Principles, CON-305 Managerial Budget.

ADM-305 Principles of Finances (4 credits)

This subject is an introductory course that covers the basic concepts essentials for the comprehension and understanding of the aspects related with the financial management. The topics to try in this course include rating models, analysis of financial state, operational leverage, financial leverage, capital budget, cost and capital handling.

Pre-requirement: CON-212 Administrative Accounting.

MER-309 Management of Sales (4 credits)

Through this subject the student will develop understanding and ability to diagnose and to solve problems to the managerial level of the sales, nature and functions, as well as the process of personal sales, design and execution of sale plans, the process of the sale, design and administration of territories, and the effective management of a force of sales.

Pre-requirement: MER-201 Marketing Principles, ADM-301 Management of Human Resources.

MER-305 International Market (4 credits)

In this subject the particularities and situations are analyzed those that the marketing professional should face to approach a foreign market for the commercialization of a good or service. An special emphasis is done in the economic, financial, cultural and legal aspects, globalization, and of logistics that impact in the international marketing; to take the student to understand the challenges that represents this branch of the marketing and to identify the analysis types and information that are necessary for the development of a plan of international marketing.

Pre-requirement: MER-304 Integrated Communication of Marketing.

MER-306 Strategic Management of Marketing (4 credits)

This subject will approach the concept of strategic planning and its application in the marketing. Emphasis will be made in the planning, sectorial analysis, competitive analysis, positioning of the organization and the product, making of strategic decisions,

design of the organizational plan and design of strategies. The role of the marketing management is analyzed in the organizations with purposes or without purposes of lucre, by means of the positioning and segmentation analysis, opportunities and threats of the market, and the management of products and of trademarks in the different stages in the life of a product, as well as the marketing strategies to continue in each one of them through the elaboration of a marketing plan.

Pre-requirement: MER-304 Integrated Communication of Marketing.

MER-308 Development of New Products (4 credits)

This subject will approach the techniques and tools of the complete process, stage for stage, of development of new products; the analysis of the tendencies and necessities for the development of a product prototype. The tests market are analyzed and their utility in the marketing. The subject leads the students to elaborate a study that allows evaluating the feasibility for the development of a new product or a line extension. The marketing strategies are analyzed for the launching or introduction of a product to the market.

Pre-requirement: MER-307 Strategy of Prices.

MER-310 Project of Marketing Internship (5 credits)

The internship is a special activity inside the career of Marketing, by means of which is sought to link the student with the reality of its career, in an atmosphere of direct relationship with the marketing activity in the public and private companies. The student will develop a final project, which consists on a Plan of Businesses, including the determination of the feasibility of carrying out a particular business accompanied by her Plan of Marketing. Also, the student carries out an obligatory practice of Patronage (Sponsorship) to a micro-company to which will recommend and will help to implement a marketing strategy. So much with the Final Project as with Sponsorship, the student integrates in an ordinate and logical way the knowledge acquired in the career.

Pre-requirements: MER-306 Strategic Management of New Products, MER-308 Development of New Products.

Next the description of the **Elective** subjects that are part of the offer of Marketing:

STRATEGY OF PRICES:

This subject approaches the different strategies of fixation of prices. The main topics include determination of the price of the product, analysis of the costs, types of costs, costs of the product, analysis of prices, break even point, sensitivity analysis toward the price, factors that influence in the establishment of the price, stages in the life of the product and the adjustment in the price politics, the price like tool for the promotion of the product, the handling of the politics and strategies of prices in the Dominican market, the prices like promotion strategies.

Credits: 4.

Pre-requirement: Micro-economy Principles and Administrative Accounting.

INVESTIGATION OF MARKET II:

This subject contemplates the design and realization of a project of market investigation, where the students will apply the concepts learned in the first part of the subject. It will be guided the student through the methodological process of the investigation, putting special attention to the application of the market investigation in the creation, development, planning and forecast of sales, and the development of new products.

Credits: 4.

Pre-requirement: Investigation of Market I.

E-MARKETING AND ELECTRONIC COMMERCE:

The focus of this subject consists on analyzing the importance of integrating the technology of the information in the design and implementation of the strategies of the contemporary marketing, as well as the potential of the technology for the handling and processing of information for the analysis of the market and the making of decisions. A special emphasis is done in analyzing how the Internet has revolutionized the purchase process and sale of goods and services in the market, modifying the patterns of the consumption of the consumers. The phenomenon of the electronic commerce is analyzed: B2B (business to business) and B2C (business to customer), the strategy of "on-line" marketing for a company and the elements of the e-marketing mix. At the same time the ethical and legal challenges the e-marketing represents for the company are analyzed.

Credits: 4.

Pre-requirement: Marketing Principles and Computer Science in the Businesses.

PROMOTION OF SALES:

This subject seeks to create in the student the key knowledge on the different tools of promotion of sales, as well as the definition of the promotional strategy for a product. A special emphasis is done in analyzing the characteristics, advantages and disadvantages of the promotional tools, as well as the form or application modality of each one of these. At the same time, the theoretical knowledge is conjugated with the development of a promotional plan, in which a communication budget is established and the mechanics that will accompany the execution of this plan.

Credits: 4.

Pre-requirement: Integrated Communication of Marketing.

PUBLICITY AND PUBLIC RELATIONS:

The subject integrates the concepts and fundamental topics of the publicity, when studying the dynamics involved in the process of creation of commercial announcements, its execution and evaluation. It is emphasized in the creative process, planning of advertising campaigns, analysis of the main media (TV, the radio, presses, magazines, Internet), design of a plan of media, as well as the investment budget in the

media. At the same time, the concept of the public relationships is approached, making special emphasis in the positioning and image of corporate trademark.

Credits: 4.

Pre-requirement: Integrated Communication of Marketing.

SPECIALIZED WORKSHOP OF MARKETING:

This shop is focused to approach different topics of interest for the actualization of the students, with special emphasis in the most modern tendencies in the marketing. These topics will change according with the necessities of the market and the demand of the students to develop skills and new knowledge in the area and to understand and to integrate the updated concepts and the dynamics of the marketing. He will understand topics like: tourist, political, ecological, merchandising, marketing above / below the line, forecast and estimation of the demand, among others.

Credits: 2.

Pre-requirement: Marketing Principles.

MARKETING OF THE TRADE RETAILER / WHOLESALER:

This subject looks for to provide the student interested in the conceptual tools the technique to intrude in the retailing business from a marketing perspective. The topics to try are: structures of the market in the retailing business, changes and tendencies in the retailing business, distribution functions, the retailer consumer, reasons and factors that influence in their purchase decision and selection of the establishment where he buys, the organization of the retailing business, organization of the goods, use of the promotion and the publicity in the retailing sales, strategies of prices, the image of the establishment, control of purchases, control of inventories.

Credits: 2.

Pre-requirement: Marketing Principles.

