UNIVERSIDAD AUTÓNOMA DEL ESTADO DE HIDALGO [HIDALGO STATE AUTONOMOUS UNIVERSITY]

SEECRETARÍA GENERAL [GENERAL SECRETARY]

DIRECCIÓN DE CONTROL ESCOLAR [SCHOOL MANAGEMENT DIRECTION]

DR. SAÚL AGUSTÍN SOSA CASTELÁN, General Secretary of this University, certifies that: ENCISO ALVA JULIO CESAR with the student account number 230015 was admitted on the term july-december 2012, had taken and completed the educative program “LICENCATURA EN MATEMÁTICAS APLICADAS (BIOLOGÍA)” [major in Applied Mathematics with minor in Biology] consisting of 56 courses 408 credits, resulting on an average grade of 9.30 (nine point three zero) which was run at “INSTITUTO DE CEINCIAS BÁSICAS E INGENIERÍA” [Institute for basic sciences and engineering] dependant on this institution.

Courses and obtained grades underlying the expedition of this Certificate:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Number | Scholar Term | Course | Grade | | Evaluation type | Credits |
| Result | Letter |
| 1 | JUL-DEC 12 | ELEMENTAL CALCULUS | 10 | TEN | OR | 8 |
| 2 | JUL-DEC 12 | GEOMETRY | 10 | TEN | OR | 7 |
| 3 | JUL-DEC 12 | MATHEMATICAL REASONING | 10 | TEN | OR | 6 |
| 4 | JUL-DEC 12 | COMPUTING AND MATHEMATICS | 10 | TEN | OR | 8 |
| 5 | JUL-DEC 12 | ENGLISH I | 10 | TEN | OR | 8 |
| 6 | JUL-DEC 12 | READING AND WRITING | 9 | NINE | OR | 6 |
| 7 | JAN-JUN 13 | DIFFERENTIAL CALCULUS | 10 | TEN | OR | 8 |
| 8 | JAN-JUN 13 | LINEAR ALGEBRA I | 9 | NINE | OR | 8 |
| 9 | JAN-JUN 13 | THEORY OF EQUATIONS | 10 | TEN | OR | 7 |
| 10 | JAN-JUN13 | PROGRAMMING I | 10 | TEN | OR | 8 |
| 11 | JAN-JUN 13 | ENGLISH II | 10 | TEN | OR | 8 |
| 12 | JAN-JUN 13 | RESEARCH METHODOLOGY | 10 | TEN | OR | 6 |
| 13 | JUL-DEC 13 | INTEGRAL CALCULUS | 10 | TEN | OR | 8 |
| 14 | JUL-DEC 13 | LINEAR ALGEBRA II | 10 | TEN | OR | 8 |
| 15 | JUL-DEC 13 | ORDINARY DIFFERENTIAL EQUATIONS | 10 | TEN | OR | 8 |
| 16 | JUL-DEC 13 | PROGRAMMING II | 10 | TEN | OR | 10 |
| 17 | JUL-DEC 13 | CODE I: CELLULAR BIOLOGY | 8 | EIGHT | OR | 10 |
| 18 | JUL-DEC 13 | ENGLISH III | 10 | TEN | OR | 8 |
| 19 | JAN-JUN 14 | VECTOR CALCULUS | 9 | NINE | OR | 8 |
| 20 | JAN-JUN 14 | LINEAR PROGRAMMING | 10 | TEN | OR | 7 |
| 21 | JAN-JUN 14 | CONCEPTS OF PHYSICS | 10 | TEN | OR | 7 |
| 22 | JAN-JUN 14 | PROBABILITY AND STATISTCS | 8 | EIGHT | OR | 7 |
| 23 | JAN-JUN 14 | CODEII: BIOCHEMISTRY | 9 | NINE | OR | 10 |
| 24 | JAN-JUN 14 | ENGLISH IV | 10 | TEN | OR | 8 |
| 25 | JUL-DEC 14 | CALCULUS ON MANIFOLDS | 10 | TEN | OR | 9 |
| 26 | JUL-DEC 14 | NUMERICAL ANALYSIS | 9 | NINE | OR | 7 |
| 27 | JUL-DEC 14 | INTRODUCTION TO DYNAMICAL SYSTEMS | 10 | TEN | OR | 7 |
| 28 | JUL-DEC 14 | PROBABILITY | 10 | TEN | OR | 7 |
| 29 | JUL-DEC 14 | CODE III: ECOLOGY | 9 | NINE | OR | 10 |
| 30 | JUL-DEC 14 | ENGLISH V | 10 | TEN | OR | 8 |
| 31 | JUL-DEC 14 | PHILOSOPHY OF SCIENCE | 8 | EIGHT | OR | 6 |
| 32 | JAN-JUN 15 | MATHEMATICAL ANALYSIS I | 10 | TEN | OR | 9 |
| 33 | JAN-JUN 15 | PARTIAL DIFFERENCTIAL EQUATIONS | 7 | SEVEN | OR | 8 |
| 34 | JAN-JUN 15 | STATISTICS | 9 | NINE | OR | 7 |
| 35 | JAN-JUN 15 | CODE IV: GENETIC | 9 | NINE | OR | 8 |
| 36 | JAN-JUN 15 | ENGLISH VI | 10 | TEN | OR | 8 |
| 37 | JAN-JUN 15 | SIMULATION I | 9 | NINE | OR | 5 |
| 38 | JAN-JUN 15 | PROFESSIONAL ETHICS | 9 | NINE | OR | 6 |
| 39 | JUL-DEC 15 | MATHEMATICAL ANALYSIS II | 8 | EIGHT | OR | 8 |
| 40 | JUL-DEC 15 | STOCHASTIC PROCESSES | 9 | NINE | OR | 7 |
| 41 | JUL-DEC 15 | THESIS PROJECT | A | ACCREDITED | OR | 4 |
| 42 | JAN-JUN 16 | COPE I (SELECT TOPICS IN BIOLOGY I) | 8 | EIGHT | OR | 8 |
| 43 | JUL-DEC 15 | ENGLISH VII | 10 | TEN | OR | 8 |
| 44 | JUL-DEC 15 | HUMANITIES ELECTIVE | 8 | EIGHT | OR | 6 |
| 45 | JAN-JUN 16 | FUNCTIONS OF COMPLEX VARIABLES | 9 | NINE | OR | 8 |
| 46 | JAN-JUN 16 | INTRODUCTION TO GALOIS THEORY | 9 | NINE | OR | 7 |
| 47 | JAN-JUN 16 | TECHNICAL COMMUNICATION | 10 | TEN | OR | 5 |
| 48 | JAN-JUN 16 | HISTORY OF MATHEMATICS | 8 | EIGHT | OR | 7 |
| 49 | JUL-DEC 15 | COPE II (SELECT TOPICS IN BIOLOGY II) | 10 | TEN | OR | 8 |
| 50 | JAN-JUN 16 | ENGLISH VIII | 10 | TEN | OR | 8 |
| 51 | JUL-DEC 16 | DYNAMIC OPTIMIZATION | 9 | NINE | OR | 6 |
| 52 | JAN-JUN 17 | RESEARCH SEMINAR | A | ACCREDITED | OR | 3 |
| 53 | JUL-DEC 16 | COPE III (COMPARATIVE ANIMAL MOPHOPHYSIOLOGY) | 7 | SEVEN | OR | 8 |
| 54 | JUL-DEC 15 | OMAS I (SELECT TOPICS IN APPLIED MATHEMATICS I) | 10 | TEN | OR | 5 |
| 55 | JAN-JUN 16 | OMASI I (SELECT TOPICS IN APPLIED MATHEMATICS II) | 9 | NINE | OR | 5 |
| 56 | JAN-JUN 16 | OMAS III (SELECT TOPICS IN APPLIED MATHEMATICS III) | 7 | SEVEN | OR | 5 |
|  | | Final average: | **9.30** | Total credits: | | 408 |

CERTIFICATE NUMBER:

2017/8312

0831209082017

[\* ”CODE” stands for ‘Mandatory Course of Specialization’]

[\*\* ”COPE” stands for ‘Optative Course of Specialization’]

[\*\*\* ”OMAS” stands for ‘Optative Course of Applied Mathemetics

The result of evaluation is numeric ranging from zero to ten; the minimum approbatory is seven for mid-superior and superior education level [equivalent to high school and undergraduate] and eight for graduate.

The initials OR (ordinary evaluation), EX (extraordinary evaluation), EL (extraordinary at liquidation), EPC (evaluation of competences).

The initials MOVN (national mobility), MOVI (international mobility), COMP (comparable), EQV (equivalent), REV (revalidated), correspond to coursed completed at other institutions.

The initials PI (institutional programs).

The courses with result A (accredited), are not considered for final average.