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1.3.2 - Number of courses that include experiential learning through project work/field work/internship during the year - 08

1. BSC (CHEMISTRY)

BSc **Programme** Paper No CHEM H **Subject** Chemistry **Code** 604 Course Dissertation Marks 25

Curriculum

STRUCTURE & MARKS DISTRIBUTION FOR THE NEW B.Sc. PROGRAMME IN CHEMISTRY (NEHU)

(ONLY CHEMISTRY PAPERS MENT	TIONED)
First Semester	Total: 100 Marks
Chem EH 101: Part A Theory (Inorganic-I, Organic-I & Physical-I) - 75 marks
Part B Practical (Organic LC-I)	- 25 marks
Chem H 101: Practical (Organic LC -I)	- 25 marks
(Chem EH 101 is both Honours and Elective: Chem H 101 is pure	ly Honours)
Second Semester	Total: 100 Marks
Chem EH 201: Part A Theory (Inorganic-II, Organic-II & Physical	I-II) — 75 marks
Part B Practical (Physical LC-I)	– 25 marks
Third Semester	Total: 100 Marks
Chem EH 301: Part A Theory (Inorganic-III, Organic-III & Physic Part B Practical (Inorganic LC-I)	eal-III) – 75 marks ? – 25 marks
Fourth Semester	Total: 100 Marks
Chem EH 401: Part A Theory (Inorganic-IV, Organic-IV & Physic	cal-IV) – 75 marks
Part B Practical (Inorganic LC-II)	→ -25 marks
Fifth Semester	Total: 200 Marks
Chem H 501: Inorganic Chemistry-V	- 50 marks
Chem H 502: Organic Chemistry-V	- 50 marks
Chem H 503: Physical Chemistry-V	- 50 marks
Chem H 504: Part A Practical (Organic LC-II)	- 25 marks Total: 50 marks
Part B Practical (Physical LC-II)	– 25 marks
Sixth Semester	Total: 200 Marks
Chem H 601: Inorganic Chemistry-VI	- 50 marks
Chem H 602 Organic Chemistry-VI	2 50 marks
Chem H 603: Physical Chemistry-VI	- 50 marks
Chem H 604: Part A Practical (Inorganic LC-III)	- 25 marks Total: 50 marks

Note. H stands for Honours alone; E stands for Elective alone; EH stands for both Elective and Honours. The above assignments of Course Numbers (e.g. Chem EH 201) is only tentative. *** Internal Marks Distribution (Test 10 marks + Assignments 9 marks)





Part B Dissertation



-25 marks



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Syllabus

Chem H 604 PART B: Dissertation

The Dissertation shall be conducted internally by the Department of Chemistry of the respective colleges. The dissertation shall be conducted formally latest by the second week of March of each year. The Report for the dissertation shall be checked by the external examiner coming for Part A of Chem H 604 before sending the final marks to the exam department.

The Topic of the dissertation shall be decided by the Department and informed to the student at least 30 (thirty) days ahead of the exact date of the dissertation. Each student shall choose a topic in consultation with the Department. The topics must be from any of the subjects of contemporary interest in Chemistry. Stu dents must submit a Write-up of the dissertation. Marks distribution shall be as follows:

Write-up and content : 7 marks Presentation :12 marks Questions/Answers : 6 marks







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2. BSC (COMPUTER SCIENCE)

Programme Subject Course

BSc Computer Science Project

Paper No Code Marks

Project CS601P 50

Curriculum

CS601P: Project

Objective

The objective of the project is to consolidate the concepts and practices that were learned during the course and to serve as a record of competence. It should enable a student to apply concretely in a small package the concepts gained from Software Engineering.

Outline of the Course

Minimum Hours	Marks		
	External	Internal	Total
75	37.5	12.5	50

Guidelines

- Overview: The project will be carried out over a duration of three months, involving minimum 100 hours for General students and minimum 180 hours for Honours students. Every student should do a project individually and not in a group. The selected project can be either of type Model 1 or Model 2 described below.
- Platform: The project can be in any platform e.g., DOS, WINDOWS, UNIX, LINUX, Mac OS, etc.
- Language and package: The project can be done using any language or package learned within or outside the course such as C, C++, Java, VB, C#, Director, tcl, VC++, Visual FoxPro, Flash, etc.
- Venue: The project can be done in the College itself or in a reputed organization.
- Guides: Internal Guides from within the college should be assigned to each student. If the project is to be done in a reputed organization, an External Guide from that organization is also required as Co-Guide, and the qualification of the External Guide should not be less than that of the Internal
- Monitoring of Projects: The progress of the project should be monitored through seminars, and each of the seminars should be evaluated, a record of which should be maintained. Every student will have to maintain a log book where the coding of the project is kept. This will have to be periodically signed by the internal guide. The number of seminars should not be less than three (e.g. Analysis, Design, Implementation).
- Final Examination: For the final external evaluation a brief summary of the project should be submitted to the university at least one week prior to the date of the examination for the benefit of the external examiner(s).









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Syllabus

Types of Project

Model 1

- The topic for the project can be any subsystem of a system software or tool or any scientific or a fairly complex algorithmic situation.
- The aim of this type is to highlight the abilities of algorithmic formulation, program and data flow representation, modular programming or object oriented programming, optimized code preparation, systematic documentation and other associated aspects of software engineering.
- The assessment would be through the Project Report, Viva and the following criteria for this model:
 - Programming style, structured design, minimum coupling and high cohesion, abstraction, encapsulation, inheritance and polymorphism, as relevant.
 - Good commenting and annotating of the code and flow of representation, such that meaningful code, with good readability and ease of maintenance, results.
 - Design specifications, depicting the method adopted and giving a simple data dictionary for each data, to cover name, type and validity aspects.

B.Sc (Computer Science) Syllabus 2015

North Eastern Hill University

Test case samples, enough in number, to adequately cover the possible chances of common

Model 2

- This model can be of a typical business application. The aim of this type is to highlight the stages
- This model can be of a typical business application. The aim of this type is to highlight the stages involved in a typical business oriented project development, though on a miniature scale, in a real or simulated environment. The appropriate use of DBMS/RDBMS towards any business application, along with adequate system analysis and structured design and development of specific tools/products, would be the underlying activity in preparing this project.

 The emphasis should be on selecting a system/subsystem that shows the DBMS/ RDBMS and System Analysis aspects to a greater degree. Any small and simple business system may be selected, although candidates are advised to use their knowledge and creativity, to select typical and intelligent applications, rather than run-of-the-mill themes, such as simple Pay roll calculation.
- and intelligent applications, rather than run-of-the-mill themes, such as simple Pay for learning or Issue-Return portion of an inventory scheme. The Evaluation stage would give due weightage for theme selection, problem analysis, fact finding techniques and initial design, which is as close to real-life business situations as possible.

 The code can be generated out of 4 GL Interface, like Screen Builder and Report Generator, Application Generator/Program Code Generators, or can be totally hand-coded or a combination of both. The documentation need not contain the code generated by these applications, but only that written by the candidate written by the candidate
- The assessment would be through the Project Report, Viva and the following criteria for this

 - Requirements leading to the project, those which were the result of System Analysis
 The design aspect of DBMS/RDBMS oriented documentation which describes the structure
 and organization of the database, well annotated source code, supplemental documentation,
 which can serve as Data Analysis and Data Flow description
 A simple Data Dictionary of the elements which form the structure

 - Details about I/O Screens and facilities for on-screen querying, print oriented Reports and built in house-keeping routines which help disk management and file integrity, are to be included to the extent possible
 - Details of Acceptance Tests which, should be in adequate number and should include error messages

Content of the Project Report

- Acknowledgement
- 2. Certificate, stating it to be a bonafide work of the student, and that it has not been submitted for any other examination, and counter-signed by the project guide(s). Synopsis of the project
- Description of the existing system
- Proposed system User requirements
- Hardware and software requirements
- Costs and benefits estimation Gantt Chart (Project Control)
- System Flow Charts, Algorithms DFD, Decision Tables, Decision Trees
- Data Dictionary
- 13. Module Design
- Database Design File Description

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B.Sc (Computer Science) Syllabus 2015

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- 16. Source Code
- 17. Input and Output Screen Design
- 18. Testing used and Test Results
- 19. Need for review: deficiencies and future enhancements
- User/Operational Manual (including menu design, security aspects, access rights, backup, controls etc.)

Data Dictionary

- 1. This should give a catalogue of the data elements used in the system/subsystem developed.
- 2. The following are the details required. Write NA where NOT applicable
 - » Data Name
 - Aliases, if any
 - » Length (size)
 - » Type (Numeric, alpha, binary, etc)
 - » Validity criterion (Minimum, maximum, etc)
 - » Default value, if any
 - » Whether related to other data items
 - » Where used in the program: Reference to data structure/file/procedures/modules

User Manual

It may include chapters like the ones suggested below:

- » Installation
- » Hardware requirements
- » System requirements
- » Installation procedure, including security aspects like password, protection, backups, controls, etc
- » Menu choices and their actions screen formats
- » Error messages
- » Output
- » A Sample test case

Viva-Voce

The viva-voce will be conducted by external examiner(s) appointed by the University and internal examiner(s) from the College. Other members of the faculty and students may be present. It will be of duration of about 15 to 20 minutes. The analysis, design aspects and quality of implementation of the project would be the main subject matter for the viva. However the general proficiency of the candidate in the selected software platform should also be tested.

Distribution of Marks

Sl. No	Criteria	Marks
1.	Analysis	7.5
2.	Design	7.5
3.	Implementation	7.5
4.	Project Report	7.5
5.	Viva	7.5
6.	Internal Assessment	12.5
	Total	50







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3. BCA (COMPUTER APPLICATIONS)

Programme Subject Course BCA Computer Application Project Paper No Code Marks

BCA-603 100

Curriculum & Syllabus

BCA Syllabus 2013

North Eastern Hill University

BCA-603: PROJECT

The project work consists of two parts as described hereunder:

A. PROJECT REPORT

In the third year, every student will have to submit a Project Report on a problem/topic to be approved by the Department running the programme in the college/institution under the supervision of a core faculty member of the department/any other competent person. At the end of the 2nd year coursework, the students are to be advised to prepare a project proposal in consultation with the faculty member(s) for approval by the department of the college/institution where they are pursuing the programme. The concerned department has to allot a faculty member under whose supervision the student has to prepare the project report. The report may be of a research/software/design/consultancy/type or any other academically/professionally justified one.

research/software design/consultancy type or any other academically/professionally justified one. The report shall contain the objectives and scope of the study, methodology used, importance of the study, recommendations etc along with flowchart, ER-diagrams, DFDs, source code, relevant charts, diagrams and bibliography etc where applicable.

A certificate of the Supervisor / the Head of the department/ program, certifying the authenticity of the report shall be attached therewith. The student will submit a copy of the report to the Head of the concerned department / programme. The report should be neatly typed in A-4 size paper and soft bound (paperback) with a front page specifying the particulars of the student and the title of the project.

B. COMPREHENSIVE VIVA

The comprehensive viva voce is to be scheduled at the end of the third year (at the time of project evaluation) in order to judge the complete personality of the student along with the understanding as well as application of the knowledge gained by the student at the end of the programme. The idea is to see whether the student has been able to comprehend what has been taught during the three-year programme and see their relevance not only in the practical field but also their interrelationship. The student is expected to answer questions raised about concepts taught in the programme.

Evaluation

The evaluation of the project report and the comprehensive viva voce will be done by three examiners- two externals to be appointed by the university and the other internal by the college/institution. The average of the two closest marks awarded by the three examiners will be taken into account for the result.

Distribution of Marks

Project Report & Demonstration

 Completion
 10 marks

 Complexity
 15 marks

 User Friendliness
 10 marks

 Domain Knowledge
 15 marks

 Project Report
 10 marks

Comprehensive Viva Voce

Subject Knowledge 20 marks

Internal Assessment 20 marks

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4. BSC (ENVIRONMENTAL SCIENCES)

Programme Subject Course

BSc **Environmental Science** Project work

Paper No Code Marks

EVS-614 25

Curriculum & Syllabus

B. Sc. Three Year Honours Degree Programme in Environmental Science North-Eastern Hill University Shillong - 793022					
	SYLLABUS				
management	B. Sc. (Honours) Environmental Science 1. The course will enable students to have a better understanding of the environment. It will broaden their knowledge in the field of ecology, natural resourcesand their management, and biodiversity management and conservation. The course also deals with aspects such as pollution and contemporary environmental issues and will equip students with knowledge on such problems.				
2 The total d	vention of the B. Sc. (Hon.) Course in Environmental Science shall	Il be of six semesters.			
3 The basic e	eligibility criterion for pursuing a B. Sc. Environmental Science is amination with Physics, Chemistry, Mathematics and Biology.	qualifying 10+2 of			
Code	Course	Marks			
	Semester I				
EVS-111	Concepts and Components of Environment	75 25			
EVS-112	Practical	23			
	Semester II	75			
EVS-211	Ecology: Population, Community and Ecosystem	25			
EVS-212	Practical				
-115010 2015	Semester III Environmental Physics and Environmental Chemistry	75			
EVS-311 EVS-312	Practical	25			
EV3-312					
	Semester IV	75			
EVS-411	Natural Resources Practical	25			
EVS-412					
	Semester V Environme	ental Issues 75			
EVS-511	Semester V Environmental Pollution and Contemporary Environmental	25			
EVS-512		75			
EVS-513	Tools and Techniques in Environmental Science	25			
EVS-514	Practical				
	Semester VI	pology 75			
entered manageria	Semester VI Biodiversity Conservation & Environmental Biotechn	10logy 75			
VS-611	Denotical	mics 75			
VS-612	Practical Environmental Laws, EIA and Environmental Econo	mics 25			
VS-613	Project Work	AND THE RESERVE OF THE PARTY OF			
VS-614	114				
	Marks = 600 + Total Practical Marks=200	TOTAL MARKS=800			







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5. BSC (ELECTRONICS)

Programme Subject Course

BSc Electronics Project work Paper No Code Marks

ELEC 602 50

Curriculum & Syllabus

SYLLABUS FOR B.Sc ELECTRONICS Course Structure: Semester – Wise distribution Total Marks: General-400, Honours-800

First Semester- Total Marks: 100 (Marks: 100)

ELEC 101(T): Semiconductor and PN junction diode, Network theorem, Measuring Instruments, D.C and A.C analysis (Marks 100, Lectures 100)

Second Semester- Total Marks: 100 (Marks: Theory: 75, Practical: 25)

ELEC 201(T): Bipolar Transistor, Biasing and Modeling, Transistor Amplifier, and Unipolar devices

(Marks 75, Lectures 80)

ELEC 201(P): Practical I (Marks 25)

Third Semester - Total Marks: 100 (Marks: Theory: 75, Practical: 25)

ELEC 301(T) Feedback and Oscillator, Multivibrator, Operational amplifier, Logic circuit and fundamentals of

(Marks 75, Lectures 80)

ELEC 301(P): Practical II (Marks 25)

Fourth Semester - Total Marks: 100 (Marks: Theory: 75, Practical + Project: 20+5)

ELEC 401(T): Fourier series and Transform, Laplace Transform, Radio wave propagation And Analog communication, 1C technology (Marks 75, Lectures 80)

ELEC 401(P): Practical III (Marks: Practical 20 + Project 5)

Fifth Semester -Total marks: 200 (Marks: Theory: 75+75, Practical: 25+25)

ELEC 501(T): Digital Electronics II (Marks 75, Lectures 80)

ELEC 501(P): Practical IV (Marks: Practical-25)

ELEC 502(T): Optical fiber and Optical Communication, Pulse Modulation, Microwaves, Power

Electronics, (Marks 75, Lectures 80)

ELEC 502(P): Practical V (Marks: Practical-25)

Sixth Semester - Total Marks 200 (Marks: Theory 100+50, Project-50) ELEC 601(T): Antenna, Transmission line, Waveguides, Control system (Marks 100, Lectures 100)

ELEC 602(T): Vector Analysis, Electro Dynamics, Quantum Mechanics, (Marks 50, Lectures 70))

ELEC 602(PR): Project Marks 50

Electronics Honours Students are to submit a project which will be evaluated out of 50 marks in the End

6. BSc (ZOOLOGY)

9862432280.

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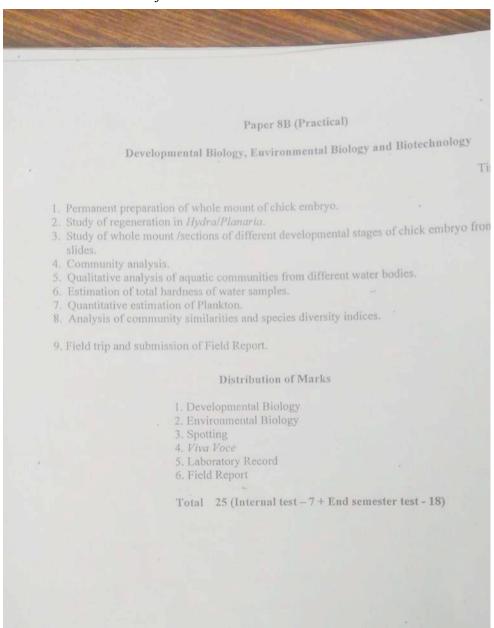
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Programme Subject Course

BSc Zoology Project work Paper No Code Marks

VIII B ZOOH602 (P) 25

Curriculum & Syllabus









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7. BSW (SOCIAL WORK)

Programme Subject Course

BSW Social Work Field Work (I-VI) Paper No

Code 103,203,303,403,503,603

Marks 25 each

Curriculum

STER	EXISTING SYLLABUS	REVISED SYLLABUS
	BSW 101 - SOCIAL WORK: AN INTRODUCTION	BSW 101 – SOCIAL WORK: AN INTRODUCTION
1	BSW 102 - SOCIOLOGICAL CONCEPTS FOR SOCIAL WORKS	BSW 102 – SOCIOLOGICAL CONCEPTS FOR SOCIAL WORKERS
	BSW103 - FILED WORK	BSW103 - FILED WORK
11	BSW201 - WORKING WITH INDIVIDUALS	BSW201 - WORKING WITH INDIVIDUALS
	BSW 202 – HUMAN GROWTH AND PERSONALITY DEVELOPMENT	BSW 202 - BASIC PSYCHOLOGICAL CONCEPT FOR SOCIAL WORKERS
	BSW 203 – FIELD WORK	BSW 203 – FIELD WORK
III	BSW 301 - WORKING WITH GROUPS	BSW 301 - WORKING WITH GROUPS
	BSW 302 - WORKING WITH COMMUNITIES	BSW 302 - CONTEMPORARY SOCIAL ISSUES AND PROBLEMS
	BSW 303 – FIELD WORK	BSW 303 - FIELD WORK
IV	BSW 401 - MIL / ALT ENGLISH	BSW 401 - MIL/ ALT ENGLISH
	BSW 402 - SOCIAL WELFARE ADMINISTRATION	BSW 402 - WORKING WITH COMMUNITIES
	BSW 403 – FIELD WORK	BSW 403 - FIELD WORK
V	BSW 501 - ENGLISH (B.COM)	BSW 501 - ENGLISH (B.COM)
	BSW 502 - SOCIAL WORK RESEARCH	BSW 502 - SOCIAL WELFARE ADMINISTRATION
	BSW 503 - FIELD WORK	BSW 503 - FIELD WORK
/1	BSW 601 - ENVIRONMENTAL STUDIES	BSW 601 - ENVIRONMENTAL STUDIES
	BSW 602 - INTEGRATED SOCIAL WORK PRACTICE	BSW 602 – SOCIAL WORK RESEARCH & STATISTICS
	BSW 603 – FIELD WORK	BSW 603 – FIELD WORK







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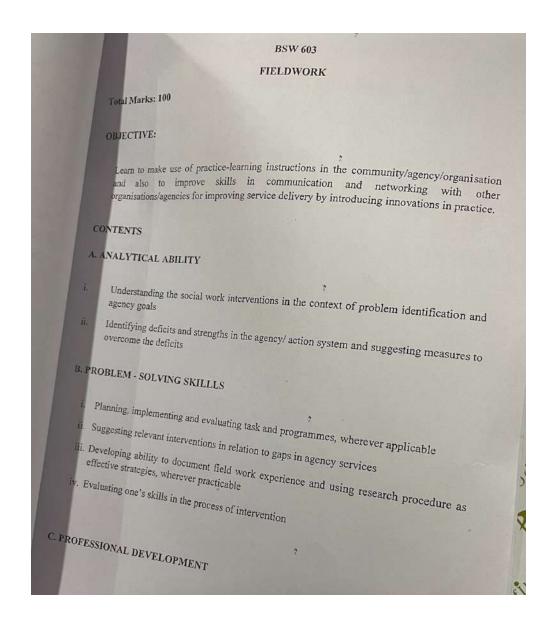


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Syllabus









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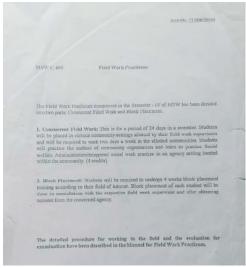
8. MSW (SOCIAL WORK)

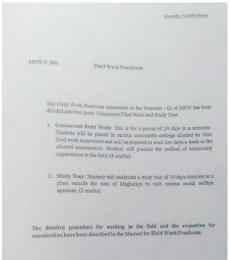
Programme Subject Course Curriculum & Syllabu s

BSW Social Work Field Work (I-IV)

Newschill Franklings Field Work Practicus 1. Coocurrent Field Work: This is for a period of 24 days during the intention. Students will be placed in serious agreey-entiting as decided by their respective field work supervisors and will be required to work two days a week in the altered agravey. Students will precise a method of social work other than what they had practiced in the Semester-1 blowers, the choice of the method will be made by the students in conceditation with their impositive supervisors keeping the nature of agricey in mind. (4 credits) ricrofth/72 Test House Field Work Practicum MSW C 105 The Field Work Promision comparant in the Semester - Lof MSW has been divided maxiwo parts. Concurrent field work and Observational institutional visits. 1. Concurrent Fired World. This is for 24 days in a sensester. The students will be placed in various agency-settings as decided by the field work supervisor The student has to work two days a week in the agency to pruntice at least one method of social work (4 crofits) 2. Observational/institutional visits for one week: For observational visit, the students are expected to visit 10 agercies working in different areas of social work or accial wolfare (2 crofits) The detailed procedure for working is the field and the evaluation for emulination have been described in the Minual for Field Work Practicum.

Paper No Code C105, 206, 305 & 405 Marks 2 credits each





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