

PROJECT

**COURSE CODE: CHEM 121**

**COURSE TITLE: BIOCHEMISTRY FOR NURSES**

**LECTURER: ROMONA OLTON**

**STRUCTURE & FUNCTION OF NUCLEIC ACIDS**

**DUE: Friday 8th December, 2017**

**Group Size: 5 Students**

The aim of this group project is to gain a thorough understanding of the structure and function of nucleic acids.

The project is divided into two parts, each group will complete **both** parts.

**Part I** should be emailed to [romona.olton@my.costaatt.edu.tt](mailto:romona.olton@my.costaatt.edu.tt) no later than 8pm on Friday 8th December, 2017. **Part II** will be presented in class from 2pm to 3pm on Friday 8th December, 2017.

Please see the Course Lecturer for your Group Number.

**Part I - Do a written report in which you:**

* Define and differentiate nucleotides, nucleosides and nucleic acids in terms of structure and function
* Describe the structure and properties of the nitrogenous bases: purines and pyrimidine
* Differentiate between the two major classes of nucleic acids: DNA & RNA
* Briefly explain the process of transcription and translation

**Guidelines for Part I:**

* The Project should contain a Table of Contents which divides the project into clearly defined and organized sections which covers the four (4) objectives listed above. Captioned diagrams and pictures may be used but must be cited in the Bibliography section.
* The Project **MUST** be typed in a size 12, Times New Roman Font, Double-spaced and Justified.
* All information sources utilized in answering the questions should be properly referenced at the end of the report in the Bibliography section.

**Part II - Build a model of the structure of:**

DNA (Groups 1 to 3) or RNA (Groups 4 to 6) to present to class.

**Rubric for grading CHEM 121 Group Project – Part I**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **WRITTEN REPORT**  *The written report should be typewritten using Times New Roman x12 font; double spaced; and printed on standard A4 or 8.5x 11 paper. The pages should be numbered and included in the table of contents. Reports that have been heavily plagiarized will not be marked.* | | | | | |
| **Content** | **12** | |  |  | | --- | --- | | **(12)**  All parts are included. No errors exist in the information. | | |  | | | **(9)**  All parts are included. Minor errors exist in the information. | **(6)**  One part is missing. Minor errors exist in the information. | **(3)**  More than one part is missing. Minor errors exist in the information. |
| **Organizational Skills** | **4** | **(4)**  Demonstrates clear and logical sequencing that is comprehensive and detailed. | **(3)**  Generally comprehensive and detailed. Small gaps in sequencing and detail. | **(2)**  Examination of topic not very clear. Gaps in sequencing and no detail on contents. | **(1)**  Shows confusion and disorder in sequencing of content. No structures and detail. |
| **Accuracy of Expression** | **4** | **(4)**  Makes virtually no grammatical, spelling or punctuation errors. Establishes credibility with the audience | **(3)**  Makes few grammatical, spelling or punctuation errors. | **(2)**  Makes a moderate number of grammatical, spelling or punctuation errors. | **(1)**  Makes repeated grammatical, spelling or punctuation errors. |
| **Aesthetics** | **4** | **(4)**  Diagrams, tables and figures so clear and understandable as to enhance report impact | **(3)**  Diagrams, tables and figures are readable and understandable; style is acceptable | **(2)**  Diagrams, tables and figures are sloppy and unclear | **(1)**  No diagrams, tables or figures are included |
| **GROUP SKILLS** | | | | | |
| **Group Skills** | **4** | **(4)**  Group members were able to work on the project and resolve group issues amongst themselves. | **(3)**  Lecturer had to intervene one (1) time to help group members to resolve group issues. | **(2)**  Lecturer had to intervene two (2) times to help group members to resolve group issues. | **(1)**  Lecturer had to intervene more than twice to help group members to resolve group issues. |
| **TOTAL / 28** |  | | | | |
| **TOTAL / 100** |  | | | | |

**Rubric for Part II**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **CRITERIA** | **MARKS** | | | **ADVANCED**  **18-20** | **INTERMEDIATE**  **9-17** | **IMMERGING**  **5-8** | **ENTRY**  **0-4** |
| Organization |  |  |  | Demonstrates logical sequencing that is clear, comprehensive & detailed. Students are completely prepared and have obviously rehearsed. | Small gaps in sequencing and detail. Students are prepared and rehearsed. | Many gaps in sequencing of content and the presentation was difficult to follow. Students are somewhat prepared, but it is clear that rehearsal was lacking. | Shows confusion and disorder in sequencing of content.  Students don't seem at all prepared to present. |
| Knowledge\* |  |  |  | Shows a full understanding of the topic. Answers all class questions with explanations and elaboration. | Shows a good understanding of the topic, is at ease with answering questions, but fails to elaborate. | Student is uncomfortable and unfamiliar with the information and shows a fair understanding of parts of the topic. | Does not seem to understand the topic very well.  Student cannot answer questions about subject. |
| Content |  |  |  | Excellent information on the subject area; comprehensive & detailed | Has most information on the subject area; Generally comprehensive. | Has some information on the subject area but not enough; | Lacked important information on the subject area. |
| Effective Communication\* |  |  |  | Fluent speech, and clear & engaging dialogue; proficient use of English & correct grammar. | Clarity maintained, only minor errors in English & grammar. Generally clear. | Student’s voice is low; some errors in fluency; reasonable use of English. | Speaks too quietly; mumbles & lacks fluency. Major errors in English and grammar. Poor use of language. |
| Collaboration\*  (based on peer review) |  |  |  |  |  |  |  |
| **TOTAL** |  |  |  |  |  |  |  |