



স্মারক: বাউবি/এসএসটি/ডিসিএসএ/৪২/৯৫/

তারিখ: ০৩ জানুয়ারি, ২০২২।

স্টাডি কেন্দ্র সমন্বয়কারী

ডিসিএসএ প্রোগ্রাম

আইএসআইটি, ঢাকা/ আইএসটি, ঢাকা/ সিএসই বিভাগ, আইআইইউসি, চট্টগ্রাম/ সিএসই বিভাগ, চুয়েট, চট্টগ্রাম/  
ডিআইআইটি, চট্টগ্রাম/ এমএআইটি, যশোর/ সিবিএসটি, ময়মনসিংহ/ বগুড়া পলিটেকনিক ইনস্টিটিউট, বগুড়া/ সিলেট  
ইঞ্জিনিয়ারিং কলেজ, সিলেট/ ইনফ্রা পলিটেকনিক ইনস্টিটিউট, বরিশাল।

**বিষয়: Diploma in Computer Science and Application (DCSA) প্রোগ্রামের ২০১৯ ব্যাচের ৩য় সেমিস্টারের ক্লাস রুটিন ও একাডেমিক ক্যালেন্ডার প্রেরণ প্রসঙ্গে।**

জনাব,

উপর্যুক্ত বিষয়ে ডিসিএসএ প্রোগ্রামে ২০১৯ ব্যাচের ৩য় সেমিস্টারের ক্লাস আগামী ১৪-০১-২০২২ তারিখে সংযুক্ত রুটিন অনুযায়ী ক্লাস শুরু ও নির্ধারিত সময়ে শেষ করার প্রয়োজনীয় ব্যবস্থা গ্রহণের জন্য অনুরোধ করা হলো। উল্লেখ্য, ২৫-০৩-২০২২ তারিখ হতে উক্ত সেমিস্টারের পরীক্ষা শুরু হবে।

এ বিষয়ে আপনাদের সহযোগিতা একান্ত কাম্য।

ধন্যবাদান্তে,

ডাঃ সরকার মোঃ নোমান

অধ্যাপক ও ডিন

এসএসটি, বাউবি

গাজীপুর-১৭০৫।

**সংযুক্তি:**

১। ক্লাস রুটিন।

২। একাডেমিক ক্যালেন্ডার।

**অনুলিপি:**

১। পরীক্ষা নিয়ন্ত্রক, বাউবি।

২। পরিচালক, এসএসএস বিভাগ, বাউবি।

৩। আঞ্চলিক পরিচালক, আঞ্চলিক কেন্দ্র, সংযুক্ত স্টাডি সেন্টারে শিক্ষার্থীদের সাথে যোগাযোগ করে অবগত করা এবং ক্লাস ও পরীক্ষার ব্যাপারে প্রয়োজনীয় ব্যবস্থা গ্রহণ করা।

৪। একান্ত সচিব, উপাচার্যের দপ্তর, বাউবি (উপাচার্য মহোদয়ের সদয় অবগতির জন্য)।

৫। একান্ত সচিব, প্রো-উপাচার্যের দপ্তর (শিক্ষা), বাউবি (প্রো-উপাচার্য মহোদয়ের সদয় অবগতির জন্য)।

৬। সংরক্ষণ নথি।

**Head office:** Gazipur-1705, Bangladesh, Fax: 88 02 9291122, Email: [info@bou.ac.bd](mailto:info@bou.ac.bd)

**City Office:** Dhaka Regional Center, 4/Ka, College Area, Govt. Lab High School Road, Dhanmondi, Dhaka-1205, Bangladesh

**Main Website:** [www.bou.ac.bd](http://www.bou.ac.bd), SST Website: [bousst.edu.bd](http://bousst.edu.bd), SST Facebook page: [fb.com/SSTBOU](https://fb.com/SSTBOU)



**Class Routine for Diploma in Computer Science and Application (DCSA)**  
**3rd Semester (2019 Batch)**  
**(January - March 2022)**  
**Date of Commencement: 14 Jan 2022**

Class Hour Date	Theoretical		Practical	12.10 - 14.00  Prayer and Lunch Break	Theoretical	Practical
	9.00 - 10.00	10.05 - 11.05	11.10 - 12.10		14.00 - 15.00	15.00 - 16.00
14-01-2022	DCSA 3302	DCSA 3301	DCSA 3301		DCSA 3303	DCSA 3303
21-01-2022	DCSA 3302	DCSA 3301	DCSA 3301		DCSA 3303	DCSA 3303
28-01-2022	DCSA 3302	DCSA 3301	DCSA 3301		DCSA 3303	DCSA 3303
04-02-2022	DCSA 3302	DCSA 3301	DCSA 3301		DCSA 3303	DCSA 3303
11-02-2022	DCSA 3302	DCSA 3301	DCSA 3301		DCSA 3303	DCSA 3303
18-02-2022	DCSA 3302	DCSA 3301	DCSA 3302		DCSA 3303	DCSA 3303
25-02-2022	DCSA 3302	DCSA 3301	DCSA 3302		DCSA 3303	DCSA 3303
04-03-2022	DCSA 3302	DCSA 3301	DCSA 3302		DCSA 3303	DCSA 3303
11-03-2022	DCSA 3302	DCSA 3303	DCSA 3302		DCSA 3301	DCSA 3301
18-03-2022	DCSA 3302	DCSA 3303	DCSA 3302		DCSA 3301	DCSA 3301

\* For any changes in this schedule, concerned coordinator is requested to inform the students as well as the Dean, School of Science and Technology, BOU in advance.

Course Code	Course Title	Number of Class	
		Theoretical	Practical
DCSA 3301	Graphics Design	10	7
DCSA 3302	Microcomputer Troubleshooting	10	5
DCSA 3303	Computer Networks	10	8

Dean  
School of Science and Technology  
Bangladesh Open University  
Gazipur-1705



**Diploma in Computer Science and Application (DCSA) Program  
Academic Calendar**

**3rd Semester (2019 Batch)  
(January - April 2022)  
Date of Commencement: 14 January, 2022**

Event	Date
Third semester class begins	Friday, 14 January 2022
Last date for submission TMA-1 (for all courses)	Friday, 18 February 2022
Last date for submission TMA-2 (for all courses)	Friday, 18 March 2022
Third semester class ends	Friday, 18 March 2022
Third semester examination begins (theory) (Tentative)	Friday, 25 March 2022
Third semester examination ends (theory) (Tentative)	Friday, 08 April 2022
Practical examination begins (Tentative)	Friday, 15 April 2022
Practical examination ends (Tentative)	Saturday, 16 April 2022

\_\_\_\_\_  
**Dean  
School of Science and Technology  
Bangladesh Open University  
Gazipur-1705**

**Bangladesh Open University**  
**School of Science and Technology**  
**Diploma in Computer Science and Application (DCSA)**  
**Third Semester**  
**List of the Practical**

Lab work: 10
Record book: 5
Viva-voce: 5
Total marks: 20

**Course: Graphics Design (DCSA 3301)**

**Practical 1: Working with Pictures**

- a) Working with Photographs
- b) Changing the Size and Shape of Scanned Images
- c) Image Enhancement
- d) Placing Photographs and Adding Captions

**Practical 2: Working with Adobe Photoshop**

- a) Installation and Introducing the components of Adobe Photoshop
- b) Creating new document in Adobe Photoshop
- c) Image Color in Adobe Photoshop
- d) Working with Color and Channels
- e) Working with Image Channels and Palettes

**Practical 3: Image Painting, Editing and Layers in Adobe Photoshop**

- a) Painting Tools
- b) Image Editing and Editing Tools
- c) Smudge, Sharpen, Lightened and Patch Tools

**Practical 4: Layers, Filters, Colors and Projects in Adobe Photoshop**

- a) Working with Layers
- b) Working with Filters
- c) Working with Color Mapping Tools
- d) Working with Color Adjusting and Color Adjusting Tools

**Practical 5: Create a Simple Project on Adobe Photoshop**

**Practical 6: Working with Adobe Illustrator**

- a) Introducing to Adobe Illustrator
- b) Working with Basic Tools
- c) Working with Drawing Objects
- d) Working with Selection Tools
- e) Managing Shapes in Adobe Illustrator

**Practical 7: Colors, Paths, Artworks, Type and Projects in Adobe Illustrator**

- a) Working with Colors in Adobe Illustrator
- b) Creating and Manipulating Paths
- c) Working with Layers and Artwork
- d) Use Type in Adobe Illustrator
- e) A Simple Project on Adobe Illustrator

**Bangladesh Open University**  
**School of Science and Technology**  
**Diploma in Computer Science and Application (DCSA)**  
**Third Semester**  
**List of the Practical**

Lab work: 10
Record book: 5
Viva-voce: 5
Total marks: 20

**Course : Microcomputer Troubleshooting (DCSA 3302)**

**Practical 1:**

- (a) Identify all peripheral devices of a PC and know their operations.
- (b) Identifying and learn about external ports and interfacing of a pc (Parallel port, Serial port, VGA Port, PS/2 Port, USB Port, Ethernet Port, Game Port).
- (c) Identify the important constituent components of a Motherboard (RAM slots, IDE controller, PCI slot, CMOS battery, AGP slot, PCI slot, CPU slot, Power supply plug in, CPU, SMPS, CPU heat Sink and fan, RAM, HDD, CD-ROM Drive, Graphics card, LAN card).

**Practical 2:**

- (a) Assembling a personal computer

**Practical 3:**

- (a) Partitioning and formatting Hard disks.
- (b) Install Microsoft Windows (XP, 7 or 8) operating system.

**Practical 4 :**

- (a) Install MS-Office.
- (b) Install and use different anti-virus software.
- (c) Understanding control panel settings of windows operating system (Accessibility Options, Add New Hardware, Add / Remove Software, Network, Printer, System).

**Practical 5 :**

- (a) Study on different network media (Coaxial cable, Twisted Pair Cable, Fiber Optic Cable).
- (b) Connect a RJ-45 connector to a CAT5 cable (both Straight-through and cross-over).
- (c) Study on NIC, Repeater, Hub, Bridge, Switch and Router.

**Bangladesh Open University**  
**School of Science and Technology**  
**Diploma in Computer Science and Application (DCSA)**  
**Third Semester**  
**List of the Practical**

Lab work: 10
Record book: 5
Viva-voce: 5
Total marks: 20

**Course : Computer Networks (DCSA 3303)**

**Practical 1:** Study of different types of Network cables, connectors and Practically implement the cross-wired cable and straight through cable using clamping tool.

**Practical 2:** Study of Different Network Devices (Router, Switch, HUB, Bridge, Gateway, Network card, Modem, Firewall) in Detail .

**Practical 3:** Studying different pools of IP addresses.

**Practical 4:** To learn and observe the usage of different networking commands (hostname, ipconfig, getmac,arp, ping, tracert, Netstat, nbtstat, nslookup) in Windows.

**Practical 5:** Connect the computers in Local Area Network in Windows.

**Practical 6:** Installation and working of Remote Desktop in Windows.

**Practical 7:** Study about File and Folder Sharing in Windows.

**Practical 8:** Study of Internet, Bowser and E-mail.

**PAYROLL SYSTEM**

**PROJECT**

**DCSA 3304**

**School of Science and Technology  
Bangladesh Open University**

## **Project Title: Payroll System of any Organization**

A case of Payroll System is given below.

Bangladesh Open University (BOU) is one of the first Open and Distance Education University in Bangladesh. It has about 1500 employees. At the moment all employees' details are kept at the Administration Building in a manual system. This causes problems. The registry doesn't know any of the details of employees and doesn't have easy access to any details about their employees. Sometimes it becomes vary much time consuming. Now Finance and Accounts division of BOU would like to *set up a database named payroll system* that would allow the Finance and Accounts division quick and easy access to the following information:

- ◆ Employees details
- ◆ Salary details
- ◆ Different types of queries
- ◆ School or division wise salary report.

### **What is Payroll System?**

Payroll system handless all types of activities related to salary, personal information and provident fund. This system may contain the following information.

#### **Employee Details**

Employee details may include.

Employee ID, Name, Designation, Name of the school/Division, Date of Birth, Telephone Number, Mailing Address, Educational Qualification, Job Experience, Publications, Outstanding Quality, Comments etc.

#### **Salary Details**

Salary details may include.

Designation or position, Basic Salary, Date of joining, Division or school, Position, Number of increments, over time pay rate, Full time, Part time, Casual, Hours, Job descriptions, Allowances (house rent), Medical, Books, Deans, Special Bonus etc. Deductions like (provident fund, benevolent fund, Conveyance, Gas, Electricity, Water, Group insurance, Tel./ Internet/ Fax, Revenue, Welfare, Contribution etc.), Gross salary, Net salary etc.

#### **Salary Report**

The payroll system should have different report generation capability. It may be school or division wise sheet or report or personal i.e., individual employee report. The Finance & Account division would like to be able to print reports showing the following information. The information is as follows:



Employee ID, Name and position, Basic pay, Special allowance, House rent, medical allowance, Gross pay, Deductions (G.P.F, GI, Welfare, Conveyance, Telephone/ Internet, Revenue, Contribution to the different associations etc. Net Pay.

The system should be able to create and print report that shows all the salary details (e.g., Basic, Allowances, Deductions, Gross salary etc.) for each of the employees of the respective schools or division.

### **Different Types of Queries**

The system would like to answer the following types of employee inquiries (as for example) :

Calculate individual pay slip with name, designation, department/division/school

How much does finance division pay in wages to individual school or division?

How much does an employee get per month?

How much an employee can deduct for GPF?

The system also may contain following sort of query:

A query that shows a list of all teachers who earn less than 15000 taka per month.

A query that shows the monthly gross salary of each employee?

### **Hints for Solving the Problems**

- ◆ Problem analysis

- ◆ Design

- Process design (Flow chart, DFD, Pseudocode)

- Output (Report design)

- Data design (Files/ relations)

- File design

- Input design (Screen)

- Menu design.

- ◆ Coding

- ◆ Testing

## DCSA 3304 Project

### Assessment Details

You must complete this project in separate groups. But you must submit this project individually. Group or team submissions will not be accepted. Your project submission will consist of a hard copy of your documentation and program code. The maximum number of marks for the project is 100 and 50% marks will be treated as pass marks.

### Marking Criteria

	Satisfactory	Unsatisfactory	Marks
<b>Problem Analysis</b>			<b>30</b>
Input (Screen) design	<input type="checkbox"/>	<input type="checkbox"/>	
Output (Report) design	<input type="checkbox"/>	<input type="checkbox"/>	
Process design (DFD, Flow chart etc.)	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Coding</b>			<b>30</b>
Consistency of coding style	<input type="checkbox"/>	<input type="checkbox"/>	
Project compiles error free (warnings ignored)	<input type="checkbox"/>	<input type="checkbox"/>	
Project runs and provides valid task solution	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Documentation</b>			<b>20</b>
List of test cases	<input type="checkbox"/>	<input type="checkbox"/>	
Source code hard copy	<input type="checkbox"/>	<input type="checkbox"/>	
User's documentation	<input type="checkbox"/>	<input type="checkbox"/>	
Summary of activity	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Viva-voce</b>			<b>20</b>
	<b>Yes</b>	<b>No</b>	
Printed Copy	<input type="checkbox"/>	<input type="checkbox"/>	
Comments:			
Overall	<input type="checkbox"/>	<input type="checkbox"/>	

## Deductions

Marks will be deducted as follows:

- ◆ for late submission – your project will be **RETURNED UNMARKED** if it reaches the university more than 2 weeks after the due date, unless otherwise arranged with the coordinator **(10 marks)**
- ◆ if the work is poorly presented or difficult to mark **(up to 3 marks)**
- ◆ inadequacy of bibliography and acknowledgments **(up to 5 marks)**
- ◆ missing documentation **(all marks)**.

## Project Submission and Presentation

This is a professional piece of work and your submission should reflect that. Following are guidelines for the submission of project.

- ◆ Word process or write your project. The writing needs to be legible.
- ◆ Sketches should be neat and properly labeled.
- ◆ Use size – A4 paper and leave at least a 3 – cm margin.
- ◆ Make and retain a duplicate copy of each project. This overcomes any problems should your project ever be lost in transit even though this rarely happens.
- ◆ Number each page of the project.
- ◆ When you submit a project, please use a project cover.

*If, in the preparation of this project, any ideas or assistance is obtained from outside your team, this must be clearly stated in your report.*

## Submission Checklist

Your submission for this project should include:

- ◆ a printed copy of your program code
- ◆ project reports(s) **(one per student)**
- ◆ a comprehensive list of test cases to test the program, and a description of how your program will respond to each of the test cases.

**Project Cover**

---

Project Title: Pay Roll System of -----

Name: .....

Student Id: .....

Study Centre: .....

Date Received: ..... Marked by: .....

Competent

Not yet competent

---

**Statement of original Authorship**

I ..... state that this project to the best of my knowledge contains no materials which has been written by any other person except where due reference is made. I make this statement in full knowledge of and understanding that, should it be found to be false, I will be subject disciplinary action under BOU rule.

Signature of student .....

Date .....