HYBRID TECHNOLOGY TRAINING
PRINCE GEORGE'S COMMUNITY COLLEGE

MICROSOFT: INSTALLING AND CONFIGURING WINDOWS SERVER 2012 R2 EXAM 70-410

STUDENT HANDBOOK

WELCOME!

Welcome to the Microsoft Installing and Configuring Windows Server 2012 R2 Exam 70-410.

Prince Georges Community College Mission Statement

Prince George's Community College transforms students' lives. The college exists to educate, train, and serve our diverse populations through accessible, affordable, and rigorous learning experiences.

Information Technology Entry Program Mission Statement

[ADD ITEP Mission Statement here].

Information Technology Entry Program Objective

The Information Technology Entry Program (ITEP) is a comprehensive multi-phase program of Prince George's Community College that develops the skills needed to enter the demanding world of IT Support. Upon successful completion of the program, the student will be able to demonstrate practical knowledge and application of their skills, exceeding that of an Entry Level Desktop and Network IT Support Technician or Tier I Help Desk Support.

Through our comprehensive approach, the material is combined into an interconnected program, allowing the instructor and student adequate time on a specific subject such as: TCP/IP, DNS, DHCP, Wireless, IPv6 or troubleshooting.

Each student is treated and trained as an information technology support professional from day one. The student will design, build, administer and maintain a live network during the program. We can do this through the delivery method of the combined and interconnected nature of this dynamic multi-phase program.

Upon completion of the Information Technology Entry Program, and with adequate preparation in addition to the contact hours, the student should have developed the skills needed to sit for the following exams: CompTIA A+, CompTIA NET+, CompTIA SECURITY+, and Microsoft MCSA.

Microsoft Installing and Configuring Windows Server 2012 R2 Objective

This course is designed as a Hybrid Virtualization Training course. It blends in class instruction with a virtual lab environment. Students will learn Windows Server 2012 Installation and Configuration. Topics include: Installing Windows Server 2012,

Configuring Network Services, Managing System Access, Troubleshooting, Monitoring and Tuning System Performance, Group Policy Objects and Implementing System Security. This course maps to a Microsoft Certification exam: 70-410.

HOW TO USE THIS STUDENT GUIDE

The student guide provides students with an overview of the course, the tools used and how the course maps to the Microsoft exam objectives.

The Student Guide is intended to be used in conjunction with the Course Syllabus and Course Schedule documents. All electronic copies of all three documents are posted in the "Syllabus & Schedule" area of the Blackboard course site for this course.

Throughout this course, you should have easy access to the Student Guide, Course Syllabus and Course Schedule documents.

The Table of Contents below provides links to all of the pertinent information found in this document.

Let's get started!

TABLE OF CONTENTS

SECTION 1: COURSE INFORMATION

Course Description

This course is designed as a Hybrid Virtualization Training course. It blends in class instruction with a virtual lab environment. Students will learn Windows Server 2012 Installation and Configuration. Topics include: Installing Windows Server 2012, Configuring Network Services, Managing System Access, Troubleshooting, Monitoring and Tuning System Performance, Group Policy Objects and Implementing System Security.

Required Textbook

Book:
70-410 Installing & Configuring Windows Server 2012 R2
ISBN: 978-1-188-88231-3
Publisher: Wiley & Sons INC.
Author: Craig Zacker

Other Required Course Materials

Online Labs:
70-410 R2 Microsoft Online Academic Curriculum (MOAC)

Note: The book and the MOAC Online Reg Card Set will be bundled together. ISBN: 978-1-118-96611-2

Required Technology Accounts

To be successful in this course, students must have access to the following technology accounts:
- o Owl Mail Email Account
- o Blackboard Account
- o Testout Account
- o 70-410 R2 Microsoft Online Academic Curriculum (MOAC)

Details on how to setup and access the technology accounts for this course can be found in the Course Technology Setup section of this document.

Prerequisites

The prerequisites for this course are: IT Foundations, A+, Network+ and Security+.

Course Meeting Schedule
This course will meet on the PGCC Largo campus Monday through Friday. The class meeting times and room location for this course can be found on the Course Syllabus document found in the Syllabus & Schedule area of the Blackboard course site.

Course Length
This course meets for 6 days.

The course consists of:
        Lecture: 40%
        Laboratory: 40%
        E-Module: 20%

Course Contact Hours
The total number of contact hours for this course is: 51.75 hours

Course Structure
This course is designed to provide a hybrid experience, including a blend of face-to-face and online activities.

      Face-to-face sessions will be held on the Largo campus in location TBD. Face-to-face activities will consist of Lecture and online labs.

      Online sessions will be a blend of self-paced and group activities using Blackboard and MOAC Labs Online. The instructor may add supplemental online activities as needed. (example testout)

Technology Requirements
Computer/internet access and mastery of basic computer skills are considered to be the student's responsibility. To be successful in this course, students must have access to:
- Blackboard
- MOAC Online Labs (https://moac.microsoftlabsonline.com)
    - Note: Students must use Internet Explorer for MOAC
    - Students must be able to install ActiveX Controls

SECTION 2: COURSE OBJECTIVES

The below outcomes are the Microsoft exam objectives.
Source: https://www.microsoft.com/learning/en-us/exam-70-410.aspx

Students, upon completion of this course, should be able to show proficiency and /or knowledge in the following areas:

1. Installing and Configuring Servers
    a. Install 2012 Server
    b. Configure 2012 Server
    c. Configure Local Storage
2. Configuring Roles and Features
    a. Configure File and Share Access
    b. Configure Print and Document Services
    c. Configure Servers for Remote Management
3. Configure Hyper-V
    a. Create and Configure VM Settings
    b. Create and Configure VM Storage
    c. Create and Configure Virtual Networks
4. Deploy and Configure Core Networking Services
    a. Configuring IPv4 and IPv6
    b. Configuring and Deploying DHCP
    c. Configuring and Deploying DNS
5. Install and Administer Active Directory
    a. Installing Domain Controllers
    b. Creating and Managing AD Users and Computers
    c. Creating and Managing AD Groups and OU's
6. Create and Manage Group Policy
    a. Creating Group Policy Objects
    b. Configure Security Policies
    c. Configure Application Restriction Policies
    d. Configure Windows Firewall

SECTION 3: COURSE SCHEDULE

Tentative Course Schedule:

MCSA Part I:	Tentative Course Schedule:	Last Updated:
Date:	Topic:	Reading Assignment:
Day 1	Installing Servers	**Chapters 1-4**
	Configuring Servers	
	Configuring Local Storage	
	Configuring File and Share Access	
Day 2	Configuring Print and Document Services	**Chapters 5-8**
	Configuring Servers for Remote Management	
	Creating and Configuring Virtual Machine Settings	
	Creating and Configuring Virtual Machine Storage	
Day 3	Creating and Configuring Virtual Networks	**Chapters 9-12**
	Configuring IPv4 and IPv6 Addressing	
	Deploying and Configuring the DHCP Service	
	Deploying and Configuring the DNS Service	
Day 4	Installing Domain Controllers	**Chapters 13-16**
	Configuring and Managing AD Users and Computers	
	Creating and Managing AD Groups and OU's	
	Creating Group Policy Objects	
Day 5	Configuring Security Policies	**Chapters 17-19**
	Configuring Application Restrictions Policies	
	Configuring Windows Firewall	

Labs:

Date:	Lab Name:	Chapter:
Day 1	MOAC70410R2-Lab1-Installing Servers	Chapter 1
	MOAC70410R2-Lab2-Configuring Servers	Chapter 2
	MOAC70410R2-Lab3-Configuring Local Storage	Chapter 3
	MOAC70410R2-Lab4-Configuring File and Share Access	Chapter 4
Day 2	MOAC70410R2-Lab5-Configuring Print and Document	Chapter 5

	Services	
	MOAC70410R2-Lab6-Configuring Servers for Remote Management	Chapter 6
	MOAC70410R2-Lab7-Creating and Configuring Virtual Machine Settings	Chapter 7
	MOAC70410R2-Lab8-Creating and Configuring Virtual Machine Storage	Chapter 8
Day 3	MOAC70410R2-Lab9-Creating and Configuring Virtual Networks	Chapter 9
	MOAC70410R2-Lab10-Configuring IPv4 and IPv6 Addressing	Chapter 10
	MOAC70410R2-Lab11-Deploying and Configuring the DHCP Service	Chapter 11
	MOAC70410R2-Lab11-Deploying and Configuring the DNS Service	Chapter 12
Day 4	MOAC70410R2-Lab13-Installing Domain Controllers	Chapter 13
	MOAC70410R2-Lab14-Creating and Managing AD Users and Computers	Chapter 14
	MOAC70410R2-Lab15-Creating and Managing AD Groups and OU's	Chapter 15
	MOAC70410R2-Lab16-Creating Group Policy Objects	Chapter 16
Day 5	MOAC70410R2-Lab17-Configuring Security Policies	Chapter 17
	MOAC70410R2-Lab18-Configuring Application Restriction Policies	Chapter 18
	MOAC70410R2-Lab19-Configuring Windows Firewall	Chapter 19

The detailed Course Schedule can be found in the Syllabus & Schedule area of Blackboard.

Instructions to access Course Schedule in Blackboard:
1. Go to Blackboard course site for this course (http://pgcconline.blackboard.com)
2. Click on "Syllabus & Schedule" navigation button
3. Click on Course Schedule document link

SECTION 4: COURSE MODULES

Module #	Module Name	Course Objective(s) Covered	# Hours
1	Installing Servers	Installing Servers	Day 1: 2 hours
2	Configuring Servers	Configuring Servers	Day 1: 2 hours
3	Configuring Local Storage	Configuring Local Storage	Day 1: 2 hours
4	Configuring File and Share Access	Configuring File and Share Access	Day 1: 2 hours
5	Configuring Print and Document Services	Configuring Print and Document Services	Day 2: 2 hours
6	Configuring Servers for Remote Management	Configuring Servers for Remote Management	Day 2: 2 hours
7	Creating and Configuring Virtual Machine Settings	Creating and Configuring Virtual Machine Settings	Day 2: 2 hours
8	Creating and Configuring Virtual Machine Storage	Creating and Configuring Virtual Machine Storage	Day 2: 2 hours
9	Creating and Configuring Virtual Networks	Creating and Configuring Virtual Networks	Day 3: 2 hours
10	Configuring IPv4 and IPv6 Addressing	Configuring IPv4 and IPv6 Addressing	Day 3: 2 hours
11	Deploying and Configuring the DHCP Service	Deploying and Configuring the DHCP Service	Day 3: 2 hours
12	Deploying and Configuring the DNS Service	Deploying and Configuring the DNS Service	Day 3: 2 hours
13	Installing Domain Controllers	Installing Domain	Day 4:

		Controllers	2 hours
14	Configuring and Managing AD Users and Computers	Configuring and Managing AD Users and Computers	Day 4: 2 hours
15	Creating and Managing AD Groups and OU's	Creating and Managing AD Groups and OU's	Day 4: 2 hours
16	Creating Group Policy Objects	Creating Group Policy Objects	Day 4: 2 hours
17	Configuring Security Policies	Configuring Security Policies	Day 5: 2 hours
18	Configuring Application Restrictions Policies	Configuring Application Restrictions Policies	Day 5: 2 hours
19	Configuring Windows Firewall	Configuring Windows Firewall	Day 5: 2 hours

SECTION 5: ASSIGNMENT DESCRIPTIONS AND RUBRICS

Course Assignment Descriptions

Grading Allocation:

Lab Assignments	40%
E-Modules	10%
Class Participation	30%
Practice Exam (70-410)	20%

Grading Scale:

Grade:	Percentage:	Quality Points:
A	95 to 100	4.0
A-	90 to 94	3.7
B+	87 to 89	3.3
B	83 to 86	3.0
B-	80 to 82	2.7
C+	78 to 79	2.5
C	73 to 77	2.3
C-	70 to 72	2.0
F	Below 69	0

Assignment Submission Instructions

Assignments must be submitted by the stated deadline or special permission must be requested from instructor before the due date. Extensions will not be given beyond the next assignment except under extreme circumstances.

SECTION 6: COURSE POLICIES

Grading Policy

The detailed Grading Policy can be found on the Course Syllabus in Blackboard.

Instructions to access Course Syllabus in Blackboard:
1. Go to Blackboard course site for this course (http://pgcconline.blackboard.com)
2. Click on "Syllabus & Schedule" navigation button
3. Click on Course Syllabus document link

Attendance Policy
Students should plan to attend all scheduled classes. If a students has an issue that prevents him/her from attending class, please notify the instructor in advance. The instructor will make sure the students knows what material was covered in class.

Late Work Policy
It is important to complete all work as assigned in a timely manner. Topics in this course build on one another. If you start getting behind on work assigned, it will be difficult to successfully complete the course. **Late work is accepted at the discretion of the instructor.**

Participation Policy
Participation is required for this course. It's 30% of your grade. Please take notes during lecture and ask questions. Please read the chapters before coming to class. Please do not use cell phone in class unless instructed to do so.

Extra Credit Policy
[ADD policy details, if applicable – or – N/A]

Plagiarism Policy
At Prince George's Community College, cheating is the act of obtaining or attempting to obtain credit for academic work through the use of any dishonest, deceptive, or fraudulent means.

Plagiarism is a form of cheating. At Prince George's Community College, plagiarism is the use of distinctive ideas or works belonging to another person without providing adequate acknowledgement of that person's contribution.

Source: PGCC Student Handbook

[ADD additional Course Policies, as necessary]

SECTION 7: COURSE TECHNOLOGY SETUP

Below are instructions to setup and access the technology tools used in this course.

Owl Mail (http://mail.students.pgcc.edu)

Owl Mail is the college's student email system. Your instructor will use Owl Mail *[ADD details here].* To be successful in this course, you should check your Owl Mail account regularly.

To activate your Owl Mail account, follow the directions at http://live.pgcc.edu/.

If you already have an active Owl Mail account, you may access your Owl Mail account at http://mail.students.pgcc.edu.

Blackboard (http://pgcconline.blackboard.com)

Blackboard is a web based program that serves as the college's online classroom. In this course, you will use Blackboard to access the eModules.

Instructions to login to Blackboard:

- Go to the Prince George's Community College Blackboard web site, which is located at http://pgcconline.blackboard.com. NOTE: There is no "www" in the Blackboard address.
- ALL STUDENTS must log in to Blackboard using their *Owl Link* account (this includes students who have used Blackboard in the past).
- If you do not have a *Owl Link* account,
    1. Go to Owl Link Website (http://www.pgcc.edu --> click "Quicklinks" --> select "Owl Link")
    2. Look up your *Owl Link* username (Under User Accounts, select "What's My User ID")
    3. Reset your *Owl Link* password (Under User Accounts, select "What's My Password")

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Note: You MUST use your student PGCC student email address in ALL communication with faculty and staff at PGCC.

- Once you have your *Owl Link* account information, type it in the Blackboard login box at the http://pgcconline.blackboard.com.
- If your login is successful, you will see the Blackboard "Welcome" screen. In the box labeled "My Courses", you will see the course or a list of courses in which you are enrolled. Click on the course name to enter your Blackboard course.

MOAC Labs Online (https://moac.microsoftlabsonline.com)

Microsoft Official Academic Course Labs Online is a Lab environment in the cloud. Students will have access to the latest Microsoft software were they can test their skills in a Virtualized environment.

Overview: Microsoft Official Academic Curriculum Labs Online is built on Hyper-V technology. Students access Virtual Machines in a Microsoft Data Center located in the US. It allows students to get hands-on experience on the latest Microsoft technologies with without having to spend $$$ on hardware. Students can access the virtualized environment from anywhere in the world with a high speed internet connection.

System Requirements:
1. Microsoft Windows Operating System: Vista, Windows 7 or Windows 8
2. Internet Explorer with ActiveX enabled. (You must use IE. It doesn't work in other browsers.)
3. Xtreme Consulting Group ActiveX RDP Client (This almost always installs when you launch the labs for the first time.)
4. Registration Code for one or more MOAC Online Labs
5. An email account. Please use your @students.pgcc.edu account.

Access Online Labs:
URL: https://moac.microsoftlabsonline.com/Account/LogOn?returnUrl=%2fMyAccount
1. Register for a new account.

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■ Microsoft

Microsoft Official
Academic Course
(MOAC) Labs Online

Email Address

Password

☐ Keep me signed in

Sign in   Forgot your password?

Register for MOAC Labs Online   Register

Terms of use   Privacy & Cookies   Support   © 2014 Microsoft

2.   Enter Your Name, Email and Password. Then click Register.

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Microsoft

Create an account

John

Doe

Your email address will be used as your login and to
retrieve a lost password, so please enter a valid address.

john.doe@students.pgcc.edu

john.doe@students.pgcc.edu

••••••••

••••••••

Type the characters you see in this picture.
This ensures that a person, not an automated program,
is creating this account.

1057

1057 ✕

3.   Click on My Code at the left. You should have received a code for each Microsoft course that you are enrolled. Enter the registration code under "Add a code to your account." Then click Add Code.

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Microsoft   Welcome John Doe

My account

My codes

Lab history

My labs

Add a code to your account

[Enter code]   [Add code]

Enter your access code and click **Add code** to add a new lab to your account. After you have entered your lab access code, it will appear in the **My labs** list below. To take your labs, click the **My labs** tab to the left.

My codes

Description	Current Status	Expiration Date	Code Used

4. Your Labs will appear below My codes.
5. Now click on My Labs. The interface will let you select which lab you want to access. For example the author selected MOAC70-410 R2. Now you may select from 19-20 different labs. The labs are mapped to the Microsoft Objectives for each exam and are also mapped to chapters in the respective MOAC books.


Labs available for MOAC70-410 R2

My account

MOAC70-410 R2

MOAC70-411 R2

MOAC70-412

MOAC70-680

| 70410R2-01 MOAC70410R2-Lab01 - Installing Servers | 70410R2-02 MOAC70410R2-Lab02 - Configuring Servers | 70410R2-03 MOAC70410R2-Lab03 - Configuring Local Storage |
| 70410R2-04 **Lab Duration**: 120 minutes **Description**: This lab contains the following exercises and activities: Exercise 4.1: Sharing a Folder; Exercise 4.2: Testing Share Access; Exercise 4.3: Working with NTFS Permissions; Exercise 4.4: Creating Shares **More...** [Take Lab] | 70410R2-05 MOAC70410R2-Lab05 - Configuring Print and Document Services | 70410R2-06 MOAC70410R2-Lab06 - Configuring Servers for Remote Management |
| 70410R2-07 MOAC70410R2-Lab07 - Creating and Configuring | 70410R2-08 MOAC70410R2-Lab08 - Creating and Configuring | 70410R2-09 MOAC70410R2-Lab09 - Creating and Configuring |

6. Select a Lab by clicking on "Take Lab"
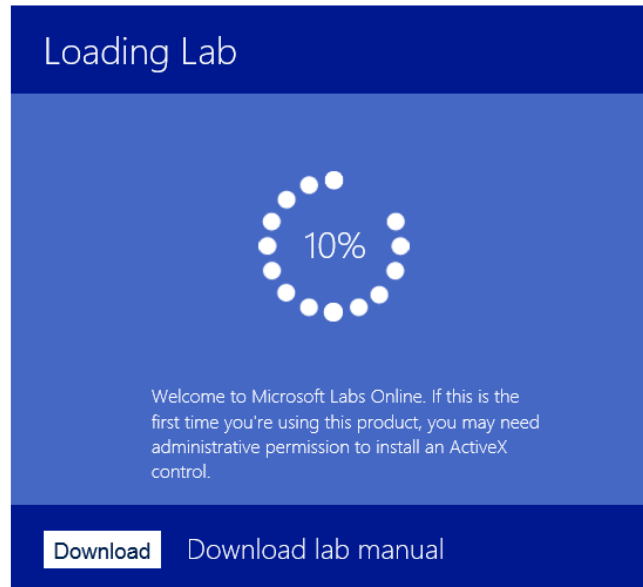
7. The first time you launch a lab, it will install an ActiveX RDP Client. You must have the Admin Username and Password in order to install this ActiveX client. Sometimes the ActiveX client will NOT install correctly. You can get a copy of the executable from your instructor.

NOTE: These labs only work with Internet Explorer. (This is because of the ActiveX RDP Client.) YOU MUST USE INTERNET EXPLORER TO DO THESE LABS.

8. Now that you are in the lab, it functions like any other Virtual Machine. On the left, you can access the VM. On the right, you can select different Virtual Machines. Click Ctrl+Alt+Delete, copy information to the clipboard and click on the Windows Key on the Virtual Keyboard.
9. Note that you can access the Lab "Manual" on the right.
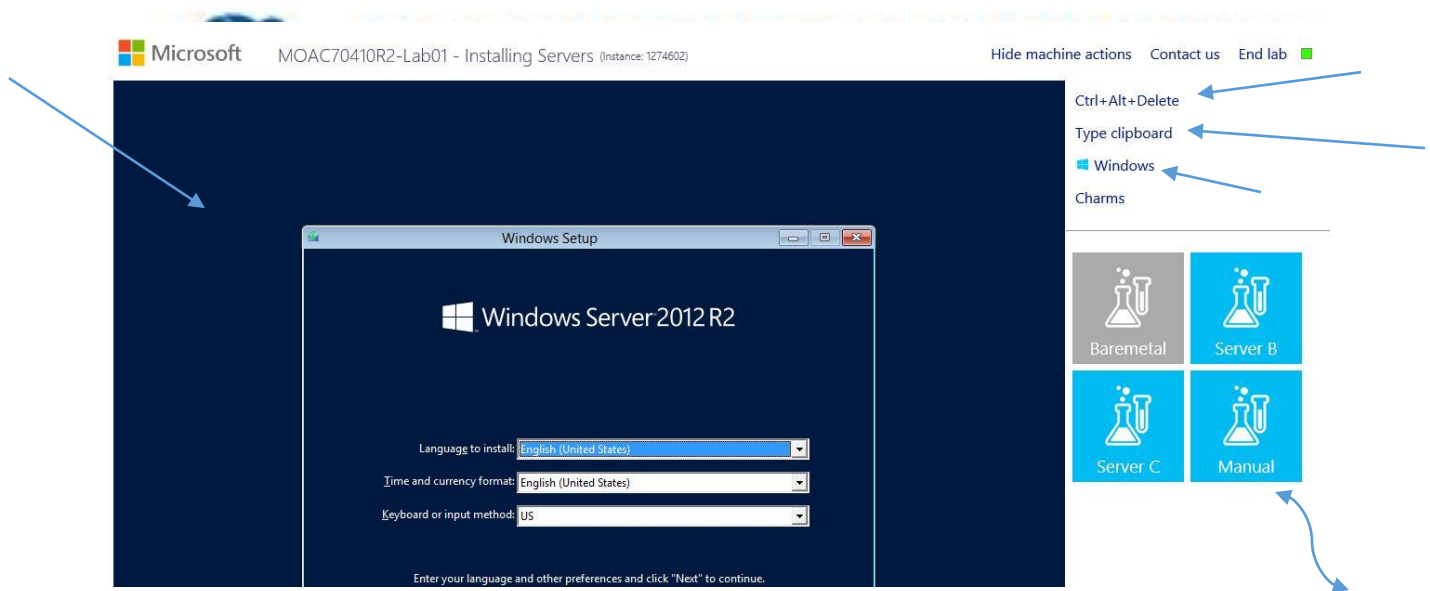
For questions and troubleshooting, Please contact Xtreme Consutling Group.

Support

Email: mocsupp@xtremeconsulting.com

Telephone: 800-239-7051

12 am – 6 pm PST, Monday through Friday
9 am – 6 pm PST, Sunday

Text Support: Click here for chat support.

Lab

SECTION 8: TECHNOLOGY QUICKLINKS

Below are url links to the technology tools used in this course:

Owl Mail	**http://mail.students.pgcc.edu**
Blackboard	**http://pgcconline.blackboard.com**
TestOut	**http://www.testout.com**
NetLabs	**https://moac.microsoftlabsonline.com**

SECTION 9: STUDENT SUPPORT

Technical Support
For technical support in this course, your first point of contact should be your instructor.

1. Blackboard: Please look to the following site:
    http://www.pgcconline.com/technicalSupport.html
2. MOAC Labs Online
    Email: mocsupp@xtremeconsulting.com
    Telephone: 800-239-7051
    Midnight – 6 pm PST, Monday through Friday
    9 am – 6 pm PST, Sunday
    Text Support: Click here for chat support.

Disability Support Services
Students requesting academic accommodations are required to contact the College's
Disability Support Services Office (B-124) or call (301) 546-0838 (voice) or (301) 546-
0122 (TTY) to establish eligibility for services and accommodations. Students with
documented disabilities should discuss the matter privately with their instructors at the
beginning of the semester and provide a copy of the completed Student/Faculty
Accommodation Form.