SCHOOL OF ADVANCED TECHNOLOGY

JAVA APPICATION PROGRAMMING

Computer Engineering Technology – Computing Science

Professor's Name: Svillen Ranev

Email:
ranevs@algonquincollege.com

Phone: 613 727 4723 x3466

Office: T-318

Out of Class Assistance: regular office hours as posted on Blackboard, scheduled appointments, Blackboard Discussions, Email

Course Number: CST8221

Course Section: 300

Academic Year: 2015 - 2016

Term: 16 Winter

Academic Level: 04

Section Specific Learning Resources

- ❖ The textbooks for this course are the same as those listed on Blackboard.
- ❖ Software resources are the same as listed in the Course Outline.

Evaluation Breakdown

Essential:
- ❖ Assessments (by name and number) corresponding to assessment categories in the Course Outline's Predefined Evaluation/Earning Credit section
- ❖ Percentage weight of each assessment adding up to 100%
- ❖ Link between assessments and Course Learning Requirements (CLRs)

Assessment	Value	CLRs
Midterm Exam	30%	1, 2
Final Exam	30%	1,2,3,4,5
Assignments	32%	1,2,3,4,5
Hybrid Assignments	4%	1,2,3,4,5
Lab Activities	4%	1,2,3,4,5

Learning Schedule (This schedule is subject to changes based on students' needs and input, and course scheduling constrains.)

Essential:
- ❖ Week number and dates when known

- ❖ Topics or subjects to be covered each week
- ❖ Learning activities and learning resources
- ❖ Assessments: what, when and weight (%) and other key dates (e.g., drop deadlines)
- ❖ Readings (by author and page numbers), websites, videos or other required resources
- ❖ Link between weekly themes and CLRs

Date	Weekly Theme and Learning Outcomes	Learning Activities	Assessments (%)	Resources	CLRs
Week 1 Jan. 11-15	• **Course overview** • GUI fundamentals. • Basic principles of GUI design.	Classroom lectures **Hybrid Activity:** Review - Anonymous Inner Classes. Lambda expressions in Java 8. **Lab:** Inner classes and basic Java GUI	Lab exercise	Topic specific resources are included in the course materials available on Blackboard. Text 1 Chapter: GUI Components – Part I Text 2 Chapter: Java FX Basics	1
Week 2	**Introduction to Java GUI API – AWT, Swing, JavaFX.** • Components, Controls and Containers**.**	Classroom lectures **Hybrid Activity:** UI Containers **Lab:** Basic components, controls and containers	Sept. 12: drop deadline for full tuition refund Lab exercise (**1% of term mark**)	Topic specific resources are included in the course materials available on Blackboard. Text 1 Chapter: GUI Components – Part I Text 2 Chapter: JavaFX Basics	1,2
Week 3	• Event Handling. • Standard Layout Managers.	Classroom lectures **Hybrid Activity:** Standard Layout Managers. **Lab:** Event Handling.	Lab exercise (**1% of term mark**)	Topic specific resources are included in the course materials available on Blackboard. Text 1 Chapter: GUI Components – Part I Text 2 Chapter: Event-Driven Programming	1,2

Week 4	**UI Components and Controls** • Text Input/Output. • Choice.	Classroom lectures **Hybrid Activity:** UI Components – Text Input/Output **Lab:** UI Components – Text Input/Output and choice. **Assignment:** Assignment 1 Part 1, **7% of term mark,** due in 2 weeks.	Lab exercise	Topic specific resources are included in the course materials available on Blackboard. Text 1 Chapter: GUI Components – Part I Text 2 Chapter: JavaFX UI Controls	1,2
Week 5	**UI Components and Controls** • Menus.	Classroom lectures **Hybrid Activity:** UI Components – Dialogs **Lab:** UI Components – Menus. Working on assignment.	Lab exercise	Topic specific resources are included in the course materials available on Blackboard. Text Chapter: GUI Components – Part II Text 2 Chapter: JavaFX UI Controls	1,2
Week 6	**Design Patterns** • OOP and Design Patterns. • MVC Design Pattern. • Observer/Observable Design Pattern.	Classroom lectures **Hybrid Activity:** UI Components – Progress Monitors **Lab:** Working on assignment. **Assignment:** Assignment 1 Part 2, **7% of term mark,** due in 3 weeks,	Assignment 1 Part 1 due (**7% of term mark)**	Topic specific resources are included in the course materials available on Blackboard. Text Chapter: GUI Components – Part II, Appendix Q – Design Patterns	1,2
Week 7	• Simple Graphics Programming. • Java Application Deployment	Classroom lectures **Hybrid Activity:** UI Components – File Dialogs. **Lab:** Working on assignment.	None	Topic specific resources are included in the course materials available on Blackboard. Text 1 Chapters Graphics and Java 2D, Applets and Java Web Start Text 2 Chapter: Advanced JavaFX	1,2

Week	Topic	Activities	Assessment	Resources	
Week 8	**Java GUI Review**	Classroom lectures **Hybrid Activity:** Review – midterm test preparation. **Lab:** Java GUI **-** Practical midterm exam (**15% of term mark**)	Assignment 1 Part 2 due (**7% of term mark)** **Midterm Exam:** Theoretical Java GUI (**15% of term mark**)	Topic specific resources are included in the course materials available on Blackboard. Text Chapters: Chapters Review	1,2
Week 9	**Java Multithreading** • Life Cycle of a Java Thread. • Thread Priorities and Thread Scheduling	Classroom lectures **Hybrid Activity:** Java Application Deployment. **Lab:** Basic Multithreading	Hybrid activity demo (**4% of term mark**)	Topic specific resources are included in the course materials available on Blackboard. Text 1 Chapter: Multithreading	2,3
Week 10	• Threads Synchronization. • Classes and Interfaces in Concurrent Packages	Classroom lectures **Hybrid Activity:** Multithreading with GUI. **Lab:** Using visual GUI builders. **Assignment:** Assignment 2 Part 1, **5% of term mark,** due in 2 weeks.	Lab exercise (**2% of term mark**)	Topic specific resources are included in the course materials available on Blackboard. Text 1 Chapter: Multithreading	2,3
Week 11	**Java Networking Basics** • Using TCP/IP Sockets	Classroom lectures **Hybrid Activity:** Network Basics. **Lab:** Working on assignment.	None	Topic specific resources are included in the course materials available on Blackboard. Text 1 Chapter: Networking	4
Week 12	**Java Networking Basics** • Using Datagram Sockets (UDP). • Manipulating URLs	Classroom lectures **Hybrid Activity:** Interruptible Sockets. **Lab:** Working on assignment **Assignment:** Assignment 2 Part 2, **7% of term mark,** due in 3 weeks	Assignment 2 Part 1 due (**7% of term mark**)	Topic specific resources are included in the course materials available on Blackboard. Text 1 Chapter: Networking	4

Week 13	**Java Database Connectivity** • JDBC Architecture. • JDBC Configuration	Classroom lectures **Hybrid Activity:** Relational Databases. Executing SQL Statements. **Lab:** Working on assignment	None	Topic specific resources are included in the course materials available on Blackboard. Text 1 Chapter: Accessing Databases with JDBC Text 2 Chapters Java Database Programming Advanced Java Database Programming	2,5
Week 14	**Java Database Connectivity** • Executing SQL Statements. **Course review**	Classroom lectures **Hybrid Activity:** Review - Preparation for the Final exam **Lab/Assignment:** Creating and manipulating a database, **6% of term mark**	Assignment 2 Part 2 due (**7% of term mark**) Lab/Assignment **(6% of term mark)**	Topic specific resources are included in the course materials available on Blackboard	2,5
Week 15 Apr. 25-30	Final Exam	Preparation for Final exam	**Final Exam (30% of the term mark)**	All of the above	1,2,3,4,5

Other Important Information

Please consult the Course Outline for important information about attendance and classroom policies specific to the course.

Please consult the Evaluation/Earning Credit section of the Course Outline for the list of Course Learning Requirements validated by assignments and tests.

Please consult the Getting Started folder on Blackboard for the Assignment Submission standard and Assignment Marking Guide.