

BACHELOR OF SCIENCE BUSINESS TECHNOLOGY MANAGEMENT

SKILLS AND EXPERIENCE

To graduate from Neumont's Bachelor of Science in Business Technology Management degree program, students must show competency with the languages, tools, and skills listed below:

EXPERIENCE

- Project management
- Business analysis
- Data modeling
- Data analytics
- Visualization business intelligence tools
- Quality assurance
- Database design and analytics
- Big data analytics
- Business and marketing strategies
- Product management
- User stories
- Mockups and prototyping flowcharts
- Empirical design
- UX design
- Quantitative and qualitative research
- Managerial finance

TECHNICAL

- SQL
- C#
- Java
- Python
- QA scripting
- Machine learning
- Data analytics
- REST APIs
- HTML
- CSS
- JavaScript

BUSINESS & PROCESS

- Software development lifecycle
- Expectation management
- System process design
- Effective communication
- Leadership skills
- Agile–Scrum and Kanban
- PCI and HIPAA compliance
- Business startups

APPLICATIONS

- SSMS
- Microsoft SQL Server
- MongoDB
- Power BI
- Tableau Software
- Axure RP
- Adobe XD
- Jira/Trello
- AWS Cloud Computing Services

BACHELOR OF SCIENCE SOFTWARE & GAME DEVELOPMENT

SKILLS AND EXPERIENCE

To graduate from Neumont's Bachelor of Science in Software & Game Development degree program, students must show competency with the languages, tools, and skills listed below:

LANGUAGES

- C++
- C#
- Java
- OpenGL Shader Language
- SQL
- JavaScript
- HTML
- CSS

APPLICATIONS

- Visual Studio
- Android Studio
- Eclipse and/or IntelliJ IDEA
- Maya and/or Blender
- Git

FOUNDATIONAL GAME DEV SKILLS

- Strong coding abilities
- 3D game engine development
- Artificial intelligence
- Advanced game physics
- Computer graphics
- Linear algebra
- Experience with agile methodologies
- Mobile game development with Unity
- Mobile Android app development
- Game design and development using Unreal

TOOLS, LIBRARIES & FRAMEWORKS

- Unity
- OpenGL
- WPF.NET
- ASP.NET
- JavaFX
- OpenGL Extension Wrangler Library

PROJECT EXPERIENCE

Software projects are completed by each student quarterly of a year-round, three-year degree program.

Each student has completed five or more five-week projects in groups including desktop, web, and distributed systems over the course of three years.

Students have completed numerous individual projects including a 10-week senior project from concept, construction, delivery, and presentation.

BACHELOR OF SCIENCE INFORMATION SYSTEMS

SKILLS AND EXPERIENCE

To graduate from Neumont's Bachelor of Science in Information Systems degree program, students must show competency with the languages, tools, and skills listed below:

SERVER ADMINISTRATION

- Windows Server 2016-2019
- Active Directory–structure and administration
- Group policy
- Routing and remote access SELinux
- User access control and maintenance
- Storage administration–NAS and SAN
- Cloud Systems–Azure and AWS
- Web Server Admin–IIS and Apache
- Docker–containerization

NETWORK

- OSI Model
- IPv4 and v6
- Routing
- VLANs
- EIGRP and OSPF
- Network design
- Wireless networking
- DNS
- DHCP
- Load balancing

PHYSICAL SECURITY

- Two-factor authentication
- Logging
- PCI compliance audit
- Disaster recovery and backup systems
- Veeam
- Policy and compliance

AUTOMATION AND SCRIPTING

- PowerShell
- Bash
- Java
- Puppet
- Chef
- Python
- HTML
- CSS
- JavaScript

SYSTEM SECURITY

- Ports Protocols and Services–HIDS and NIDS
- Access-control lists
- Firewalls
- VMware ESXi and vCenter
- Virus and malware detection and management

VIRTUALIZATION

- VMWare ESXi
- Hyper-V
- Virtual Networking–standard and distributed switching
- VDI
- vCenter
- System Center

BACHELOR OF SCIENCE WEB DESIGN & DEVELOPMENT

SKILLS AND EXPERIENCE

To graduate from Neumont's Bachelor of Science in Web Design & Development degree program, students must show competency with the languages, tools, and skills listed below:

WEBSITE DESIGN

- UX design
- Graphic design
- Mobile app development–Android
- Digital video compositing/editing
web game development

LANGUAGES

- JavaScript
- HTML
- CSS
- Java
- C# (elective)
- Ruby (elective)

DATABASES

- SQL
- MongoDB

APPLICATIONS

- Photoshop
- Illustrator
- InDesign
- Premiere
- After Effects
- Visual Studio
- Android Studio
- Eclipse
- Visual Studio Code
- Git

TOOLS, LIBRARIES, FRAMEWORKS ANGULAR

- React
- Node.js
- Express.js
- Socket.IO
- Less and/or SaaS

BACHELOR OF SCIENCE COMPUTER SCIENCE

SKILLS AND EXPERIENCE

To graduate from Neumont's Bachelor of Science in Computer Science degree program, students must show competency with the languages, tools, and skills listed below:

LANGUAGES

- Java: Desktop and Web
- C++: Desktop
- C#: Desktop and Web
- JavaScript
- HTML
- CSS
- Ruby
- Python

DATABASES/PERSISTENCE

- SQL/Relation
- al: SQL
- Server
- NoSQL
- MongoDB
- Cassandra
- Riak
- JSON
- XML
- Flat binary file

APPLICATIONS

- Eclipse
- Visual Studio
- MainOS:
- Window with some Linux
- Android Studio
- IntelliJ IDEA

FOUNDATIONAL CS SKILLS

- Algorithms, data structures, and computational theory
- Calculus, algebra, geometry, trigonometry, statistics, and encryption
- Software engineering—processes and design
- Object oriented programming (OOP)

PROJECT EXPERIENCE

- Software projects are completed by each student quarterly of a year-round, three-year degree program.
- Each student has completed five or more five-week projects in groups including desktop, web, and distributed systems over the course of three years.
- Students have completed numerous individual projects including a 10-week senior project from concept, construction, delivery, and presentation.
- Desktop experience in GUI and console applications.
- Web development experience in data driven dynamic web apps using platforms ASP.NET, MVC, and MEAN stack.
- Students have built service-oriented, distributed applications.
- Each student has experience with both planned, waterfall, and agile methodologies.

BACHELOR OF SCIENCE SOFTWARE ENGINEERING

SKILLS AND EXPERIENCE

To graduate from Neumont's Bachelor of Science in Software Engineering degree program, students must show competency with the languages, tools, and skills listed below:

LANGUAGES

- Java—web, mobile, and desktop
- C#—web and desktop
- .NET—web and desktop
- C—desktop
- C++—desktop
- HTML
- CSS
- JavaScript
- Python

DATABASES/PERSISTENCE

- RDS
- SQL
- MySQL
- Postgres
- NoSQL
- Neo4j
- MongoDB
- Redis
- Riak
- Cassandra
- DynamoDB
- Redshift
- ETL—Airflow
- JSON
- XML

APPLICATIONS

- AWS—Lambda, RDS, EC2, VPC, MQ, S3, and Glue
- Docker and containers
- IDE—Eclipse, IntelliJ IDEA, and VS
- Windows with some Linux

FOUNDATIONAL CS SKILLS

- Software engineering—processes and design
- Software design patterns
- Algorithms, data structures, and computational theory
- Calculus, algebra, geometry, trigonometry, statistics, and encryption
- Docker, containerization, and virtualization
- Integrating existing third-party systems like RabbitMQ, Cassandra, Eureka, Zuul, SQL Server, PostgreSQL, etc.

PROJECT EXPERIENCE

- Software projects are completed by each student quarterly in a year-round, three-year degree program.
- Each student has completed five or more five-week group projects spanning desktop, web, and distributed systems over the course of three years.
- Students complete numerous individual projects including a 10-week senior project from concept, construction, delivery, and presentation.
- All students have experience in distributed development with data driven service-oriented enterprise apps using Spring Boot, Python, ASP.NET, MVC, and MEAN.
- Students have experience in both web and apps ranging from UX to back-end services.
- Each student has desktop experience working with GUI and console applications.
- Students have experience using planned, waterfall, and agile methodologies.