Programming: Senior Developer

**Career Cluster:** Information Technology

**Program of Study:** Computer Programming & Interactive Media

**Course Description:** This course focuses primarily on developing the students’ qualifications for entering the Software Development industry. Students are expected to be proactive and solve problems using skills developed in prerequisite courses.

*As a senior, a great deal of autonomy is expected from the students. Students are expected to be proactive and wasting class time will not be tolerated.*

**Student Outcomes/Objectives:**

By the end of this course, students will be able to: (examples below)

1. Pass the Nocti Computer Programming Exam and receive certification
2. Obtain at least one additional certification in software development
3. Mentor Junior Developers in the class
4. Organize and participate in complex development projects, and communicate effectively
5. Develop new software for use in the classroom by teachers and students of the school

**Course Details:** This course is approximately 400 hours of in-class time (one Year). It is intended for 12th grade students. This course requires Programming: Junior Developer. Expertise in other academic subjects will improve a student’s success in this course.

**Equipment and Supplies:** Equipment will be provided to complete the work in class, including a laptop or lab machine capable of running a web browser, any text editor, NodeJS, and has access to a command line terminal. *All assignments can be completed using the school-provided student laptops, as we have worked with IT to make sure the appropriate software is installed and configured.*

**Evaluation Strategy:**The majority of grading will be done by “Documentation Packets”. Please see the “DocPac System Explanation” document for more details. Occasionally, traditional exams and test will be given to ensure progress is being made in achieving Nocti and certification expertise.

## Parents

*Please read this and all attached documents carefully. Many of the policies outlined in this document are consistent across all classrooms in the Information Technology Academy.*

*Data has shown that the parent involvement is the leading factor in student success. If you have any concerns,* ***please*** *contact me via email or phone to discuss your student’s success in my class.*

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## Classroom Restrictions:

*We believe that positive reinforcement is more effective than negative. As such, we have minimized our classroom restrictions to only the most critical restrictions.*

* **Cell Phones**: *Every day in class we practice focus and eliminating distractions, and building good work ethic for a variety of work environments the students may encounter in their future careers.*
  + **All cell phones are to remain in the student’s backpack during class time.**
  + The teacher may designate “breaks” during class, in which the teacher will explicitly state whether the students are permitted to use their phones.
  + *If you must contact your student, please call the main office to have the message relayed as per the school policy, or wait for your student’s lunch break.*
* **Personal Devices and Software / Lab Equipment:** *We teach the division between personal and professional life, and how to respect the company property.*
  + Students are not permitted to bring **any** personal devices to the class without prior permission
  + Students may not download or run personal software on lab equipment without prior permission
  + Students are not permitted to connect personal devices to lab equipment or electrical outlets, except flash drives to back up their school-related data *only*.
* **No Food** : *The IT classrooms are filled with equipment that is fragile and difficult to replace. Food and drinks are the primary cause of equipment damage.*
  + No food is allowed in the classroom
  + Drinks must have a sealable lid that prevents spillage.
  + Students are given sufficient time to eat breakfast and lunch in the cafeteria
* **No Disruptions:** *Behavior that interferes with other students’ ability to learn will not be tolerated.*
  + Students who distract and disrupt learning in the class will be temporarily removed
  + Students may choose to participate in the class or be bored. No exceptions.

## Grading Policy

* **Proactivity**: *Students are expected to practice self-advocacy, anticipating challenges, and finding solutions.*
  + Students are expected to communicate with the teacher about forthcoming absences
  + Students are responsible for “catching up” after an unplanned absence, and should communicate with the teacher
  + Students can contact the teacher through Schoology messaging and email
* **Late Assignments**: *Recent school years have built poor habits surrounding deadlines. In class we practice hitting deadlines as we would in a professional environment.*
  + Any assignment not turned in by the marked due date is marked “Missing” in the gradebook and considered a “0” (failure).
  + Students have one week (five school days) to turn in the missing assignment for full credit. Failure to do so makes the assignment a permanent “0”.
  + If students cannot complete the work within five days past the due date, **the student must contact the teacher** for an extension before the time expires.

## Rewards System

*We believe that positive reinforcement is more effective than negative. As such, we are developing a reward system to encourage students to engage in their education.*

* Students may earn custom plastic “Pogs” (yes, the toy from the 1990’s) for completing tasks at the teacher’s discretion. Earning rewards may include:
  + Turning in assignments on time
  + Taking time to turn in excellent quality assignments
  + Helping other students succeed
  + Random school uniform checks
  + Doing well in class activities
  + Completing personal projects and participating in extracurriculars
  + Fixing bugs and assisting teacher
  + Earning certificates or reaching career-building milestones
* Students may spend these “Pogs” to earn special privileges. These may include:
  + Bypassing classroom restrictions (Food and devices in class)
  + Allowed to use the class Gaming station (Virtual Reality, Retro games, etc.)
  + Use of the classroom 3d printers
  + Special user account privileges on the lab machines
  + Use of special chairs and workstations
  + Personal / Class wide “Game Days”, where no work is required that day

## Senior Expectations:

Our primary mission as technical instructors is to ensure that young adults are able to transition into a sustainable career. In this course, a very high expectation of behavior and engagement is placed on Seniors. As I see it, if a student is deemed responsible enough to have a part time job, leave school early, drive a vehicle on public roads, and join the military, then the responsibilities placed on them in class are quite minor. Our school also believes deeply in service to others in our community. As such, the goal of this course is to make students responsible not only for their own education, but for other students in their school as well. Students will be expected to be good role models to their juniors, and to assist in their studies. They are also expected to use the skills they have obtained in this course to create solutions to problems within the school. Finally, the students are expected to begin networking, developing a resume, and collect evidence of their skills in portfolios of the aforementioned problems they have solved.

* Become role models to younger students by maintaining professional and mature behavior in the classroom.
* Mentor Junior developers in their studies.
* Obtaining certifications, passing the NOCTI, and completing the Program Task List.
* Begin developing a career by networking/taking advantage of opportunities presented to them by instructors in class.
* Begin developing a portfolio by developing software for use in the classroom/school by other students.
* Begin developing a resume by accumulating and accurately documenting accolades.

Syllabus Acknowledgement

By signing below, the parties acknowledge they have been given a copy of the syllabus for the class they are enrolled in within Computer Programming & Interactive Media. They also acknowledge that the attending student is responsible for completing the stated objectives in the syllabus, which will be tracked by Program Task List and Syllabus Learning Objectives. Students may obtain a copy of the Program Task List or the Syllabus at any time. The student is also bound to the Rewards System, Grading Policy, and Classroom Restrictions outline in the syllabus.

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| Parent Name and Signature |  | Date |
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| Student Name and Signature |  | Date |
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