

## Tentative Schedule

Lecture Instructor: Sarah Gothard, Ph.D.

Email: [sgothard@bju.edu](mailto:sgothard@bju.edu)

Office: Alumni 84

Telephone: (864) 242-5100 ext. 8152  
(937) 321-5167 for urgent texts

Office Hours: MWThF 8:15-9:45 am  
MWF 12:00-12:45 pm *by appointment only*  
T 8:15-10:30 am  
TTh 2:00-2:45 pm

Lecture Instructor: Charles Lacey

Email: [clacey@bju.edu](mailto:clacey@bju.edu) (or Microsoft Teams)

Office: Alumni 70

Office Hours: By appointment at [calendly.com/clacey-bju](https://calendly.com/clacey-bju)

Lab Instructor: Donna Lawrence

Email: [dflawren@bju.edu](mailto:dflawren@bju.edu)

Office: Alumni 8

Office Hours: M-Th 9:00 and other times by appointment

## Course Description

This course provides an introduction to working and living in an increasingly digital world, with an emphasis on teaching students biblical principles for managing their digital lives and critical thinking skills necessary to learn new technology, evaluate online resources, find relevant information pertaining to a given topic and protect their privacy / identity online. 3 credits.

## Course Resources

- *Story Telling with Data* (Knaflic)— Available from Library: <https://ebookcentral.proquest.com/lib/bju/detail.action?docID=4187267>
- [\*From the Garden to the City\*](#) (G2C). John Dyer. Grand Rapids, MI. Kregel Publications. 2011. 978-0-82-542668-1
- [\*Blown to Bits\*](#) (B2B). Hal Abelson, Ken Ledeen, and Harry Lewis. Upper Saddle River, NJ. Addison-Wesley. 2008. 978-0-13-713559-2 Free [PDF](#)

## Assignments

**Quizzes** - Out of class quizzes will be given checking students understanding material.

**Labs** - Labs are weekly assignments that reinforce concepts covered in lecture while also provided the student exposure to other material.

**Presentation** - Students will sign up to present a chapter of *From the Garden to the City*. A professional PowerPoint slide deck as well as a recording of the presentation will be submitted to the professor.

**Data Visualization Project** – Students will analyze several datasets and produce a written report that demonstrates critical thinking skills and the ability to produce appropriate representations/conclusions of the data.

**Exams** - 3 exams will be given periodically throughout the semester. Exams will check the student's understanding of material covered in labs, lectures, and readings preceding the exam.

## Grading

### Grading:

Qty	Item	Points	Total	Scale:	
11	Labs	20	220	A	90-100%
1	<a href="#">Presentation</a>	30	30	B	80-89%
1	<a href="#">Project</a>	100	100	C	70-79%
3	Exams	100	300	D	60-69%
11	Quizzes	~10	100	F	<60%
3	Other	5	10		
<b>Total Points:</b>			760		

## Course Policies

In this course, topics build on the previous topic. Thus, if you fall behind, you will struggle with new content. For this reason, I do not accept late work.

- Work is due *before* the deadline. Work submitted at 11:59 pm is late. Early, impressive work is strongly encouraged.
- Late work receives a **ZERO**, unless you use a [late submission voucher](#).

## Late Submission Vouchers

- Every student gets 2 late vouchers for the semester.
- Each token can be redeemed for a resubmission or a late submission.
- Tokens can only be used within 7 days of the original due date.
- Tokens are only applied upon request.
- Exclusions: Tokens cannot be used on assignments over 50 points.

## Class Department Guidelines

### Professionalism

University classes are a place to sharpen your professional habits.

- Arrive on time.
- Dress appropriately.
- Engage with the material.
- Eliminate distractions.
- Take pride in your work.
- Build relationships.
- Encourage growth in others.

### Class Attendance

- Arrive early to find a good seat and prepare to engage in course material.
- Save absences for sick days or unavoidable circumstances.
- Physical attendance is required; scanning a QR code or signing an attendance sheet is insufficient for class attendance.

### Student Engagement

- Take notes, answer questions, and engage with the material.
- Avoid reading/studying other materials, answering emails, and/or sleeping in class.

### Technology Usage

Appropriate application of technology is strongly encouraged in this class. Inappropriate use of technology is strongly discouraged.

- Laptops and tablets may be used as needed to engage with course material.
- Cellphone use is prohibited except for scanning QR codes and other class activities.
- Students using technology to answer emails, text, watch videos, play games, browse the internet, scroll social media sites, or work on non-course material will be dismissed from class and reported absent.

### University Policies

#### Handbook Policies

Compliance with student handbook policies is expected during class.

#### Attendance Policy

You are expected to attend class and be on time:

- A partial attendance will be recorded when you miss less than 15 minutes of the beginning and/or end of a lecture or lab. If you miss more than 15 minutes of lecture or lab, you will be marked absent.
- Students who exceed 1 lab absence or 2 lecture absences may be withdrawn from class.
- If you need to miss class for any reason, please contact me as soon as possible. Assignments and tests should be completed before planned absences.
- [BJU Attendance Policy](#).

#### Accommodations for Students with Disabilities

Students are required under Section 504 to communicate the need for accommodations and provide documentation to the Academic Resource Center Accommodations Office in AL 213.

Visit <https://success.bju.edu/> for more information. Students are encouraged to seek an appointment in the first week, as accommodations are not provided retroactively.

#### Academic Honesty and Integrity Policy

Taking credit for someone else's work is unethical in any setting. In a university setting, it undermines the ability of faculty to accurately evaluate your competence, harming you and the institution's reputation. For these reasons, the penalties for academic dishonesty may be severe.

**Quizzes** are intended to check your understanding of recently presented material. No between-student collaboration is permitted on quizzes; All quizzes are open book, open notes, and open internet.

- Do not share the questions on each quiz with another student.
- Do not share your answers to a quiz with any other student.

**Tests** are to be completed by yourself with no external resources (notes, books, or the internet).

- Do not have any tabs open besides the tab in which you are taking the tests.
- Do not have any other applications (especially chat programs) open during the test.
- Do not have any electronic devices out during a test.

**Labs and Projects** provide practice for the course material. Some student collaboration is acceptable on labs; however, under no circumstance are students permitted to share answers or work. If a fellow student is confused on a lab you have completed, you may point out mistakes and describe solutions verbally.

- Do not share your solution with any other student in any form.
- Do not share or receive any files from any other student in any form.
- Do not let another student look over your solution.
- Do not touch another student's mouse or keyboard while helping them.

- No “spoilers”: if an assignment leaves information out for students to figure out, do not share that information. Learning sometimes takes struggling.

See the [Computer Science Department’s Academic Integrity Policy](#) and the [BJU Academic Integrity Policy](#).

## Generative AI

Since the goal of the assignments in this course is to learn to develop the skills covered NOT complete the tasks assigned, and since the use of AI to complete or jumpstart tasks defeats the goal of the assignments, you may not use generative AI tools (i.e., Chat GPT, Bing Chat, Google Bard, etc.) in this course for any assignment without the professor's express permission.

In this course, you have permission to use generative AI tools for how-to information, such as how to insert an image or what formula to use. You must include a note explaining what tool was used and what prompts you gave it. For example, "I used ChatGPT with the prompt, 'Create an Excel formula to add a column of numbers.'"

## Getting Help

Start assignments early enough to ask for assistance well in advance. Students struggling with an assignment or concepts in the class are encouraged to ask the instructors for assistance in class, after class, via email, or during office hours.

## Curriculum Information

### Context

This course supports the following goals of the BJU Core (BJUC):

CS 2. Demonstrate essential communication skills in reading, writing, listening, and speaking.

CS 3. Understand the physical world as God’s creation, as a stewardship given to man, and as the physical expression of His glory.

CS 4. Demonstrate critical thinking in analyzing, evaluating, and synthesizing information and ideas.

CS 5. Develop solutions to problems, working independently and with others, through critical and creative thinking.

CS 6. Integrate all of life in a biblical worldview.

This course supports the following computer science program learning objectives (PLO):

- 1. Design and implement efficient solutions to problems in various domains.
- 2. Demonstrate an ability to work effectively in teams.
- 3. Demonstrate an ability to communicate technological information effectively both in written and oral forms.
- 5. Demonstrate an understanding of social, professional, and ethical considerations related to computing.

## Course Goals

Specifically, the goals of this course are to

- effectively use technology / internet resources

- understand the basic components of computing (hardware / files / folders)
- understand how to effectively and efficiently search for information on an unknown topic
- understand how to safely use online resources protecting privacy and data
- use technology (office software) to effectively / professionally / creatively communicate
  - Microsoft Word – understand how to perform basic and intermediate tasks
  - Microsoft Excel – understand how to perform basic and intermediate tasks as well as how to represent data
  - Microsoft PowerPoint – understand how to perform basic and intermediate tasks as well as how to use as presentation aid
  - Microsoft OneDrive – understand how to appropriately use shared folders to work in groups
- summarize, interpret, and communicate data
  - understand how to understand the quality of the data based on its source and the information contained
  - understand the limitations of data representation and how to represent data effectively and clearly
  - understand how to communicate information obtained from data to a general audience

### Learning Outcomes

Upon successful completion of this course you will be able to

1. articulate a biblical philosophy of technology. (CG1, PLO3)
2. use standard computer applications to retrieve and analyze data, construct models, solve problems, and present the results. (CG2, CG5)
3. demonstrate an understanding of the fundamentals of computers and networks, the digital representation of information, and the social impact of computers and technology. (CG2, CG5)
4. apply a strategy to test solutions and diagnose problems in information technology. (CG3)
5. exhibit algorithmic thinking to program in an object-based language. (CG13)
6. explain safe computing practices derived from information security principles. (CG1)

### Tentative Schedule

Week	Date	Topic	Assignments	Due

1 (½ wk)	1/15-17	Introduction Koans of Bits Basics, organization, and collaboration	<a href="#">B2B</a> pg. 4-13  <a href="#">Lab 0</a>	
2	1/20	<b>MLK Jr. Day - No Class</b>	<a href="#">G2C</a> Intro, Ch. 1 Lab 1 ( <a href="#">101/201</a> )	
	1/22-24	Documents (Word)		
3	1/27-31	Presentations (PowerPoint)	G2C, Ch. 1 <a href="#">PowerPoint Tutorial</a> Lab 2 ( <a href="#">101/201</a> )	Lab 1 <a href="#">Lecture Quiz 1</a> G2C Presentation Signup
4	2/3-7	Koans of Bits, Spreadsheets (Excel)	G2C, Ch. 2 <a href="#">Storytelling</a> , Intro Lab 3 ( <a href="#">101/201</a> )	Lab 2 <a href="#">Book Quiz 1</a>
5	2/10-14	<a href="#">Test 1 Review</a> <a href="#">Test 1 Review (Section 3)</a>	G2C, Ch. 3 Storytelling, Foreword (print pp. ix-x; digital pp. 14-15) <a href="#">Lab 4</a>	Lab 3 <a href="#">Lecture Quiz 2</a>
6	2/17	<b>Test 1</b>	G2C, Ch. 4 Storytelling, Introduction (print pp. 1-17, digital pp. 18-32) Lab 4	<a href="#">Book Quiz 2</a>  <a href="#">Verses for Lab 8 Paper</a>
	2/18-21	<b>Bible Conference - No Classes</b>		
7	2/24-28	Biblical View of Technology	G2C, Ch. 5 Storytelling,	Lab 4 <a href="#">Book Quiz 3</a>

		Data Visualization	Ch.5 Lab 5 ( <a href="#">101/201</a> )	
8	3/3-7	Generative AI Data Presentation & <a href="#">Bias</a>	Storytelling, Ch. 6 Lab 6 ( <a href="#">101/201</a> )	Lab 5 <a href="#">Excel Quiz</a> <a href="#">G2C Chapter Presentation</a>
9	3/10-14	HTML & CSS	G2C, Ch. 6 Storytelling, Ch. 7-8 Lab 7 ( <a href="#">101/201</a> )	Lab 6 <a href="#">Quiz: code.org 1</a>
10	3/17-21	<a href="#">Test 2 Review</a> <b>Test 2</b>	G2C, Ch. 7 Storytelling, Ch. 2, 4 Lab: Data Reporting Project Workday	Lab 7
	3/24-28	<b>Spring Break - No Classes</b>		
11	3/31-4/4	The Internet Search Techniques	G2C, Ch. 8 <a href="#">B2B</a> , Ch. 2 <a href="#">Lab 8</a>	<a href="#">Data Reporting Project</a>
12	4/7	Number Formats	B2B, Ch. 3 Lab 9 ( <a href="#">101/201</a> )	Lab 8 <a href="#">Quiz: code.org 2</a> <a href="#">Quiz: HTML, Hex, Decimal, Binary</a>
	4/9	<b>University Service Day - No Class</b>		
	4/11	Lab: Website		
13	4/14-18	Secure Communication	G2C, Ch. 9 Lab 10 ( <a href="#">101/201</a> )	Lab 9 <a href="#">Quiz: code.org 3</a>
14	4/21-25	Byte sizes, Compression	B2B, Ch. 3 G2C, Ch. 10	Lab 10 <a href="#">Quiz: code.org 4</a>



		LMC	Lab 11 ( <a href="#">101</a> /201)	<a href="#">Quiz: Internet, Digital Safety</a>
15	4/28- 5/2	LMC <a href="#">Review</a>	<a href="#">Lab 12</a>	Lab 11, Lab 12
<b>Final Exam</b> <b>9 am Section:</b> May 5th at 8:00–9:10 a.m. <b>10 am Section:</b> May 6th at 9:30–10:40 a.m. <b>1 pm Section:</b> May 5th at 12:30–1:40 p.m.				

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