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**Calumet College**

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*Calumet College of St. Joseph is a Catholic institution of higher learning dedicated to the academic, spiritual and ethical development of undergraduate and graduate students. Informed by the values of its founding religious community, the Missionaries of the Precious Blood (C.P.P.S.), the College promotes the inherent dignity of all people, social justice, an ethic of service, student empowerment, opportunity, and lifelong learning.*

*We are committed to the Five Pillars of a CCSJ Education: The CCSJ graduate will be Open to Growth, Intellectually Competent, Religious, Loving, and Committed to Doing Justice. This class, as outlined below, will help you to achieve those goals.*

**COURSE SYLLABUS, Fall 2019****Course: MATH 171 A Principles of Statistics****Instructor Information:**

<b>Instructor Name</b>	Carrie Hutton
<b>Office Number:</b>	302
<b>Phone Number:</b>	219-473-4284
<b>Email:</b>	chutton@ccsj.edu
<b>Hours Available:</b>	<ul style="list-style-type: none"><li>• MTWR 7:30 AM – 8:30 AM</li><li>• MW 10:00 AM – 12:00 PM</li><li>• MW 3:15 PM – 5:00 PM</li><li>• Please note that meetings and appointments can effect these hours.</li><li>• Additional office hours are available by appointment</li></ul>

**Instructor Background:** B.S. Actuarial Science, Indiana University; M.S. Mathematics and Statistics, Purdue University; M.S.E. Engineering, Purdue University; Ed.D Leadership in Education, American College of Education

**Course Information:**

<b>Course Time:</b>	Tuesday and Thursday 8:30 – 10:00 AM
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<b>Classroom:</b>	TBD
<b>Prerequisites:</b>	MATH 103 with a grade of 'C' or better, or an equivalent Accuplacer score
<b>Required Books and Materials:</b>	Bluman; <u>Elementary Statistics</u> ; Ed 9 McGraw-Hill ISBN: 9780078136337  **It is strongly recommended that you have a Texas Instrument 84 (TI-84) for this class.

**Learning Outcomes/ Competencies:**

Through appropriate assessments students will demonstrate that they are able to:

1. **Remember** the necessary steps and procedures for gathering and interpreting statistical data, understanding the nature of probability and statistics, frequency distributions and graphs, data descriptions, probability and counting rules, discrete probability distributions, and the normal distribution.
2. **Understand** what each procedure, interpretation, graph, computation, and relation means on a conceptual level.
3. **Apply** their understanding of gathering and interpreting statistical data, graphing data, computing probabilities, and using the normal distribution to solve application problems.
4. **Analyze** problems in physics, economics, business, and biology to determine appropriate methods for solving them using statistical methods and concepts.
5. **Evaluate** proposed solutions with respect to commonly accepted practices used in physics, economics, business, and biology.

This course meets the following General Education objectives:

1. Students can represent, apply, analyze, and evaluate relevant qualitative and quantitative mathematical and scientific evidence to support or refute an argument (e.g., using equations, graphs, diagrams, tables, words).

**This course meets Calumet College of St. Joseph's Signature Assignment requirement to demonstrate fundamental competency in quantitative reasoning and scientific inquiry.**

**Course Description:** This course treats the gathering and interpretation of statistical data presented in various forms. Topics include the nature of probability and statistics, frequency distributions and graphs, data descriptions, probability and counting rules, discrete probability distributions, and the normal distribution.

**Learning Strategies:**

Group discussions, lecture, IXL software, and lots of practice. The objective is to promote your understanding of mathematics concepts and to enable you to apply them in a meaningful way. You are encouraged to rely on logical thinking, rather than on memorization. It is VERY important that you READ the sections of the textbook, STUDY the examples and WORK problems. **Active participation in class** and utilization of services such as the CCSJ Student Success Center will help ensure your success.

It is also suggested that you utilize Khan Academy for additional help on homework outside of the classroom.

<https://www.khanacademy.org/math/probability>

**Experiential Learning Opportunities:**

Real world Statistics project

**Assessments:**

<b>Assessments:</b>		
<b>Exams</b>	Chapter Exams (1-2, 3,4,5,6)	40% of grade
<b>Cumulative Final Exam</b>	Chapter 1 – Chapter 6	20% of grade
<b>Experiential Project</b>	Please see project description and rubric posted on Blackboard	10% of grade
<b>Textbook Homework</b>	Assigned Weekly per schedule	10% of grade
<b>IXL Homework</b>	Assigned Weekly per schedule	10% of grade
<b>In Class Assignments</b>	Assigned Regularly in Class	10% of grade
<b>Class Participation:</b>	<p><b>Tests and In Class Assignments:</b></p> <ul style="list-style-type: none"> <li>• Five <u>chapter tests</u> will be given during the term and <u>one comprehensive final exam</u> during exam week.</li> <li>• You will be allowed to use one piece of paper (8 ½ x 11), one side only, of notes on your chapter tests.</li> <li>• You will be allowed to use a calculator on all exams.</li> <li>• You will NOT be allowed to use any electronic devices on an exam (i.e. phone, tablet, etc.).</li> <li>• <b>Please note that you MUST pass your exams to pass this course.</b></li> <li>• Thoughtful completion of your homework should be done to practice and prepare for your exams.</li> <li>• You will be allowed to drop your lowest CHAPTER EXAM score (<b>NOT final exam score</b>). If you are absent on the day of an exam, that will be your dropped exam score.</li> <li>• There are <b>ABSOLUTELY NO make-up exams for any reason</b>. That is why you are allowed to drop your lowest chapter exam score. (If you have an athletic competition or other important appointment, send me an electronic notice at least 48 hours in advance and you can take the exam BEFORE you peers).</li> </ul>	

	<ul style="list-style-type: none"> <li>In class assignments cannot be made up, but your lowest score will be dropped. In class assignments will not be announced ahead of time.</li> </ul> <p><b>Written homework assignments and IXL homework assignments:</b></p> <ul style="list-style-type: none"> <li>Homework is critical to your success in this course. The written homework and IXL homework are meant to serve as practice for the exams.</li> <li>Your written homework should be neat and organized. Problems should be copied from the book and all necessary work should be shown. <b>Answers without work will not be given credit.</b> All written homework from the textbook will be due when you take your exams.</li> <li><b>NO LATE HOMEWORK</b> will be accepted, for any reason, period. You are welcome to turn it in early, but never late.</li> </ul>	
<p><b>Grading Scale:</b></p> <p>100 – 92: A      91 – 90: A-  89 – 88: B+      87 – 82: B      81 – 80: B-  79 – 78 : C+      77 – 72: C      71 – 70 : C-  69 – 68: D+      67 – 62: D      61 – 60: D-  59 and below      F</p>		

<b>Responsibilities</b>	
<b>Attending Class</b>	<p>You cannot succeed in this class if you do not attend. We believe that intellectual growth and success in higher education occur through interaction in the classroom and laboratories. However, we do not want to penalize students for participating in college-sponsored events. When you miss class because of a college event, you must give notice of your absence in advance, and you are responsible for all missed work. Being absent doesn't excuse you from doing class work; you have <b>more</b> responsibilities to keep up and meet the objectives of this course.</p> <p style="text-align: center;"><i><b>Eighty percent of success is showing up.</b></i> -Woody Allen</p> <p>Attendance is important and is expected. You are responsible for all material covered in class, including announcements of assignments and quizzes. If you miss class, you must contact the instructor by email (<a href="mailto:chutton@ccsj.edu">chutton@ccsj.edu</a>) within 24 hours. The instructor is more than willing to meet you halfway on this, but remember that there are TWO halves. If you are more than 15 minutes late to class, that will count as an absence. <b>BE PRESENT, BE ON TIME.</b></p>
<b>Turning In Your Work</b>	<p>You cannot succeed in this class if you do not turn in all your work on the day it is due.</p>

<b>Meeting Standards for Classroom Behavior</b>	<ul style="list-style-type: none"> <li>• <b>Use all the class time.</b> Come to class on time and stay in class until the end. Coming late, leaving early, and getting up during class disrupts the class and disrespects others.</li> <li>• <b>Come prepared.</b> Bring your texts, be prepared to take notes, and be able to demonstrate that you have completed the assignments for the day through your participation in class.</li> <li>• <b>Respect others.</b> Listen when your classmates and the instructor are speaking. Think about their contributions. Respond appropriately.</li> <li>• <b>Use electronic devices only for class purposes.</b> Engage with your classmates and the instructor without technological distractions.</li> </ul>
<b>CCSJ Student Honor Code</b>	<p>This course asks students to reaffirm the CCSJ Student Honor Code:</p> <p>I, as a student member of the Calumet College academic community, in accordance with the college's mission and in a spirit of mutual respect, pledge to:</p> <ul style="list-style-type: none"> <li>• Continuously embrace <b>honesty and curiosity</b> in the pursuit of my educational goals;</li> <li>• Avoid all behaviors that could impede or distract from the academic progress of myself or other members of my <b>community</b>;</li> <li>• Do my own work with <b>integrity</b> at all times, in accordance with syllabi, and without giving or receiving inappropriate aid;</li> <li>• Do my utmost to act with commitment, inside and outside of class, to the goals and <b>mission</b> of Calumet College of St. Joseph.</li> </ul>
<b>Using Electronic Devices</b>	<p>Electronic devices are out of place in the classroom. Please keep them silent and put away during class. Additionally, <b>NO ELECTRONIC DEVICES OF ANY KIND ARE TO BE USED ON QUIZZES OR EXAMS.</b></p>
<b>Doing Your Own Work</b>	<p>If you turn in work that is not your own, you will be subject to judicial review by the Faculty-Student Grievance Committee. These procedures can be found in the Student Planner. The maximum penalty for any form of academic dishonesty is dismissal from the College.</p> <p>Using standard citation guidelines to document sources avoids plagiarism. You'll find guides to the major citation methods at the CCSJ Specker Library Web page at <a href="http://www.ccsj.edu/library/subjectsplus/subjects/guide.php?subject=cite">http://www.ccsj.edu/library/subjectsplus/subjects/guide.php?subject=cite</a></p> <p><b>PLEASE NOTE:</b> All papers may be electronically checked for plagiarism.</p>
<b>Withdrawing from Class</b>	<p>After the last day established for class changes has passed (see the College calendar), you may withdraw from a course by following the policy outlined in the CCSJ Course Catalog.</p>
<b>Tracking Your Progress</b>	<p>Your midterm grade will be available on MyCCSJ between Weeks 6 and 8. Be sure to see how you're doing and follow up with your instructor.</p>
<b>Sharing Your Class Experience</b>	<p>Your voice matters! At the end of the term, you will have the opportunity to evaluate your classroom experience. These confidential surveys are essential to our ongoing efforts to ensure that you have a great experience that leaves you well prepared for your future. Take the time to complete your course evaluations – we value your feedback!</p>

## Resources

<p><b>CCSJ Book Rental Program</b></p>	<p>The CCSJ Book Program ensures that everyone has the right course materials on the first day of class to be successful. You pay a book rental fee each semester, and in return, receive all the materials for all your classes prior to the beginning of classes. At the end of the semester, simply return the books. For traditional students, the Book Rental Program is conveniently located in the library, where students can pick up and return their books. For students in accelerated programs and graduate programs, books will be delivered to their homes and they can return them by mail. For more information, see <a href="http://www.ccsj.edu/bookstore">http://www.ccsj.edu/bookstore</a>. <b>All books must be returned at the end of the semester or you will incur additional fees, which will be charged to your student account.</b></p>
<p><b>Student Success Center:</b></p>	<p>The Student Success Center provides faculty tutors at all levels to help you master specific subjects and develop effective learning skills. It is open to all students at no charge. You can contact the Student Success Center at 219 473-4287 or stop by the Library.</p>
<p><b>Disability Services:</b></p>	<p>Disability Services strives to meet the needs of all students by providing academic services in accordance with Americans with Disabilities Act (ADA) guidelines. If you believe that you need a “reasonable accommodation” because of a disability, contact the Disability Services Coordinator at 219-473-4349.</p>
<p><b>CCSJ Alerts:</b></p>	<p>Calumet College of St. Joseph’s emergency communications system will tell you about emergencies, weather-related closings, or other incidents via text, email, or voice messages. Please sign up for this important service annually on the College’s website at: <a href="http://www.ccsj.edu/alerts/index.html">http://www.ccsj.edu/alerts/index.html</a>.</p> <p>In addition, you can check other media for important information, such as school closings:</p> <p><b>Internet:</b> <a href="http://www.ccsj.edu">http://www.ccsj.edu</a>  <b>Radio:</b> WAKE – 1500 AM, WGN – 720 AM, WIJE – 105.5 FM, WLS – 890 AM, WZVN – 107.1 FM, WBBM NEWS RADIO 78  <b>TV Channels:</b> 2, 5, 7, 9, 32</p>
<p><b>Student Assistance Program</b></p>	<p>Through a partnership with <b>Crown Counseling</b>, Calumet College of St. Joseph provides a free Student Assistance Program (SAP) to current students. The SAP is a confidential counseling service provided to students for personal and school concerns which may be interfering with academic performance and/or quality of life. The SAP counselor is available on campus once a week and off-site at the Crown Counseling offices in Crown Point or Hammond. For more information, <b>contact Kerry Knowles SAP Counselor</b>, at 219-663-6353 (office), 219-413-3702 (cell), or <a href="mailto:kerryk@crowncounseling.org">kerryk@crowncounseling.org</a>.</p>

**Course Schedule:**

**I reserve the right to change this schedule to meet the needs of the class.**

<b>Date</b>	<b>Topic</b>	<b>Homework Assigned</b>	<b>Homework Due Date/Time</b>
8-27-19	Introduction to class  Chapter 1: The Nature of Probability and Statistics	Textbook (TB) p.36 Chapter Quiz #1 – 25 all  IXL Algebra I: JJ.2 – Experimental probability JJ.4 – Identify independent and dependent events	9-10-19 at the beginning of class (Exam I)  9-2-19 by 10 pm
8-29-19	Chapter 2: Frequency Distributions	TB p. 105 Chapter Quiz #1 – 29 all  IXL Algebra I: N.1 – Interpret bar graphs, line graphs, and histograms N.2 – Create bar graphs, line graphs, and histograms N.3 – Interpret circle graphs N.4 – Interpret stem and leaf plots	9-10-19 at the beginning of class (Exam I)  9-9-19 by 10 pm
9-3-19	Chapter 2: Frequency Distributions	Continue with Chapter 2 homework	
9-5-19	Recitation – bring homework questions		
9-10-19	<b>Exam I – Chapter 1 and Chapter 2</b>	None	All Textbook homework is due TODAY, at the BEGINNING of class.

			NO LATE HOMEWORK will be accepted
9-12-19	Chapter 3: Data Description	TB p.181 Chapter Quiz #1 – 32 all  IXL Algebra I: KK.2 – Mean, median, mode, and range KK.3 – Quartiles KK.5 – Identify an outlier and describe the effect of removing it KK.7 – Variance and standard deviation N.5 – Interpret box and whisker plots	10-1-19 at the beginning of class (Exam II)  9-30-19 by 10 pm
9-17-19	Chapter 3: Data Description	Continue with Chapter 3 homework	
9-19-19	Chapter 3: Data Description	Continue with Chapter 3 homework	
9-24-19	Chapter 3: Data Description	Continue with Chapter 3 homework	
9-26-19	Recitation – bring homework questions		
10-1-19	<b>Exam II – Chapter 3</b>	None	All Textbook homework is due TODAY, at the BEGINNING of class. NO LATE HOMEWORK will be accepted
10-3-19	Chapter 4: Probability and Counting Rules	TB p. 250 Chapter Quiz #1-50 all	10-17-19 at the beginning of class (Exam III)



		<p><b>IXL Algebra II:</b>  <b>CC.1</b> – Introduction to probability  <b>CC.2</b> – Calculate probabilities of events  <b>CC.5</b> – Find probabilities using combinations and permutations  <b>CC.12</b> – Find probabilities using addition rule</p> <p><u><i>Approved Research Question and Groups submitted to instructor, in writing</i></u></p>	<p>10-14-19 by 10 pm</p> <p><b><u>TODAY</u></b></p>
10-8-19	Chapter 4: Probability and Counting Rules	Continue with Chapter 4 homework	
10-10-19	Chapter 4: Probability and Counting Rules	Continue with Chapter 4 homework	
10-15-19	Recitation – bring homework questions		
10-17-19	<b>Exam III – Chapter 4</b>	None	<p>All Textbook homework is due TODAY, at the BEGINNING of class. NO LATE HOMEWORK will be accepted</p>
10-22-19	Chapter 5: Discrete Probability Distributions	<p>TB p. 306 Chapter Quiz #1-33 all</p> <p><b>IXL Algebra II:</b>  <b>DD.1</b> – Identify discrete and continuous random variables</p>	<p>11-7-19 at the beginning of class (Exam IV)</p> <p>11-4-19 by 10 pm</p>

		<b>DD.2</b> – Write a discrete probability distribution <b>DD.3</b> – Graph a discrete probability distribution <b>DD.4</b> – Expected values of random variables	
10-24-19	Project Work Day	Develop data collection instruments  Begin to collect data	
10-29-19	Chapter 5: Discrete Probability Distributions	Continue with Chapter 5 homework	
10-31-19	Chapter 5: Discrete Probability Distributions	Continue with Chapter 5 homework	
11-5-19	Recitation – Bring homework questions		
11-7-19	<b>Exam IV – Chapter 5</b>	None	All Textbook homework is due TODAY, at the BEGINNING of class. NO LATE HOMEWORK will be accepted
11-12-19	Chapter 6: The Normal Distribution	TB p. 364 Chapter Quiz #1-34 all	12-3-19 at the beginning of class (Exam V)
11-14-19	Chapter 6: The Normal Distribution	Continue with Chapter 6 homework	
11-19-19	Chapter 6: The Normal Distribution	Continue with Chapter 6 homework	

11-21-19	Recitation – bring homework questions		
11-26-19	No Class – Thanksgiving Recess		
11-28-19	No Class – Thanksgiving Recess		
12-3-19	<b>Exam V – Chapter 6</b>	None	All Textbook homework is due TODAY, at the BEGINNING of class. NO LATE HOMEWORK will be accepted
12-5-19	Project Presentations		
12-10-19	Review for final exam		STUDY!!!
12-12-19	Final Exam		Congrats! You have finished the semester!