

Course: BIO 345 Pathophysiology  
Instructor: Lisa Legere, MS, RHIA  
Office Hours: by appointment on-line

Lecture: Online  
Instructor Contact: [lisa.legere@maine.edu](mailto:lisa.legere@maine.edu)  
Or use the email button in the course

**Course Description:**

A study of the physiological, genetic, biochemical and environmental basis of noninfectious diseases.  
Prerequisite: grade of C- or higher in BIO 109, BIO 113, or BIO 223, or permission of instructor. Cr3

**Required Materials:****Essentials of Pathophysiology**

Author: Carol Porth  
Edition: 5th  
ISBN: 9781975107192  
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***NOTE:** On the inside cover you will see your textbook has a learning program called “thePoint”. This is a great resource to utilize for study purposes. This is NOT required; however, I would recommend utilizing the resources to help you with the material in the course. thePoint also includes practice study questions that are great to use for studying for the exams.*

**Course Organization:**

This is a fully online course through Brightspace. Our section is 100% online and does not have any scheduled live or zoom sessions. We do however have work due each week with firm due dates. You must have constant, reliable access to a properly configured, up-to-date computer with a dependable Internet connection, either a USM computer or your own desktop computer or laptop. This is a requirement for the course. **Electronic devices do not support Brightspace testing and other features.**

Active participation is expected and enhances your ability to integrate the material and achieve success in the course. Online courses require a high degree of planning, time management, and effort on your part. There will be a variety of course instructional materials included in the course. You are expected to read the chapter(s) and review these materials before you participate in discussion boards, and complete other graded work in the course. These materials will assist you with learning the material in our course. Since we are fully online with no live meetings, these instructional materials are the lecture (instructional) part of the class.

I will actively facilitate your integration of materials and provide appropriate communication, class activities, assignments, study techniques, assessment, and group and/or individual learner assistance. All instructional activities are directed toward you meeting each of the course objectives and achieving successful course and work-place outcomes.

**Course Objectives:**

This course will:

- 1) expand your understanding of normal body function, and to use this understating as the basis for gaining an appreciation of the physiological basis for some important diseases.
- 2) provide a basic understanding of how the body reacts to disease and compensates for some important diseases, and
- 3) explore the physiological basis for the treatment of some important diseases

**Additional Learning Outcomes:**

This class has also been approved as part of a suite of courses that meet the USM general education requirement for Science Exploration. This suite of courses also includes the 2-semester A&P sequence and Health Related Research. The learning outcomes for this gen ed requirement that will be met by this course are that students will be able to:

- 1) articulate the boundaries of science and how science differs from other disciplines both in content and methodology including how scientists create knowledge of natural processes through scientific methods
- 2) discuss the relevance of science in their lives and how it may affect them in their public and private roles
- 3) understand and be able to use the vocabulary and concepts of the science, building science literacy regarding natural processes in the world
- 4) use quantitative reasoning skills in the solution of science problems
- 5) discuss the strengths and the limitations of the sciences, and recognize that scientists differ in their interpretations of data
- 6) demonstrate skills of effective communication and analysis

**Contacting the Instructor:**

The best way to reach me is through email. There is a **Brightspace email** tab right in the course. Emails outside of USM often go into the spam folder. I want to make sure that I don't miss your email, so please use your USM student e-mail for all other correspondences. I try and respond to all emails within 24-48 hours (most of the time within 24 hours). If for some reason I don't respond don't hesitate to email me again. I do take Saturdays as a family day, so I am not online on Saturdays.

**Attendance:**

There is no specific amount of time that you must spend in our course, however I strongly recommend that you log in at least 3-4 times per week (non-consecutive days). *There is work to do every week with firm due dates*, so full attendance and participation are expected. ***To be considered "present" for class, you must be submitting work regularly, as required throughout the semester.***

**Late and Makeup Work:**

The way to do well in this course is to be aware of what's coming up and complete ALL work to a high standard. Due dates for all work show up on the schedule. I also understand that life happens. Communication is key, especially in a fully online course. If something comes up, please reach out to me ASAP so a plan can be put into place. You MUST reach out before the due date to see if an extension is possible without deduction. Late deduction for work turned in after the due date without an extension:

Assignments turned in after the due date will lose 5 points per day it's late. Late work will also not be accepted after it's 7 days late and/or an exam has been given over the material.

Exams need to be submitted on time and cannot be done late unless there's an extreme circumstance and approval by the instructor prior to the exam due date.

The discussion board rubric has timeliness as part of the grading. Please see the grading rubric regarding late discussion posts. Discussions are not accepted once they are 7+ days late.

Extra credit work isn't available in this course, and I don't drop any grades. Incomplete (I) grades are available only in extreme, narrow circumstances.

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**Schedule:**

Please see the end of syllabus for course schedule (assignment due dates, exams, etc). It can be helpful to print the course schedule and check off the items as you complete them, so you can be sure you've completed all of the graded work for the week. *The due dates are really "due by" dates. Work is due by 11:59pm on the last day of each availability period and can be submitted anytime during its availability period. Don't wait until the last minute to submit work, in case something comes up for you.*

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**USM Policies****Accommodations:**

The university is committed to providing students with documented disabilities equal access to all university programs and services. If you think you have a disability and would like to request accommodations, you must register with the Disability Services Center. Timely notification is essential. The Disability Services Center can be reached by calling 207-780-4706 or by email [dscusm@maine.edu](mailto:dscusm@maine.edu). If you have already received a faculty accommodation letter from the Disability Services Center, please provide me with that information as soon as possible. Please make a private appointment so that we can review your accommodations

**Title IX statement:**

The University of Southern Maine is committed to making our campuses safer places for students. Because of this commitment, and our federal obligations, faculty and other employees are considered mandated reporters when it comes to experiences of interpersonal violence (sexual assault, sexual harassment, dating or domestic violence, and stalking). Disclosures of interpersonal violence must be passed along to the University's Deputy Title IX Coordinator who can help provide support and academic remedies for students who have been impacted. More information can be found online at <http://usm.maine.edu/campus-safety-project> or by contacting Sarah E. Holmes at [sarah.e.holmes1@maine.edu](mailto:sarah.e.holmes1@maine.edu) or 207-780-5767. If students want to speak with someone confidentially, the following resources are available on and off campus: University Counseling Services ([207-780-4050](tel:207-780-4050)); 24 Hour Sexual Assault Hotline ([1-800-871-7741](tel:1-800-871-7741)); 24 Hour Domestic Violence Hotline ([1-866-834-4357](tel:1-866-834-4357)).

**Academic honesty:**

Academic honesty is of the utmost importance in all classes because it maintains the integrity of the entire educational process. Plagiarism, cheating, and falsification of information are violations of academic integrity that will not be tolerated in this class. Please check the USM Office of Community Standards website for official definitions of these practices. For a more information about academic honesty please become familiar with the USM Student Academic Integrity Policy. You can also get a copy of the policy through the Office of Student Judicial Affairs. If you are in doubt concerning the requirements, please consult me before you complete any assignment so that I can give you "a read" on what is/ is not acceptable.

**Drop/ Incomplete Policy:**

USM establishes the policy for grading when a student drops a course. A student may receive a grade of W if s/he withdraws before 60% of the course is completed. A grade of "W" has no effect on the GPA. After that time, the grade is "F." It is important that students understand that this is a University policy. I cannot give grades of "W" to students who leave a class after the set date no matter how much I may wish to. I do, of course, understand that circumstances beyond the control of a student (for example, health or family emergencies) may arise late in the semester and that these circumstances may make it impossible for a student to complete a course. If you are passing this course and an emergency arises that makes it impossible for you to finish, please contact me to discuss a grade of "Incomplete." I will consider requests for an incomplete when: 1) a legitimate emergency exists, 2) the student is passing at the time of the request, and 3) the student has a realistic plan to complete the course work by the end of the following semester.

**On-line Course Evaluations:**

USM is now using an Electronic Course Evaluation (ECE) system and this course is included in the project. During the last week of classes, students will receive an email notice that asks you to complete your course evaluation online. This email will include a direct link to the course evaluation, and you will log-in by using your Mainstreet ID and password. Your ratings on the evaluation would be very useful to your instructor if you answer thoughtfully and honestly. The responses you give are confidential and will be collected by the Office of Academic Assessment. After the final grades are posted, your instructor will receive a summary report of the student responses. All student feedback is valued and is being used for course and program improvement purposes. Thanks, in advance, for your participation.

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## Course Information and Grading

### **Background information about Pathophysiology:**

*"Science is the use of evidence to construct testable explanations and predictions of natural phenomena, as well as the knowledge generated through this process." (National Academy of Sciences, 2008).*

Pathophysiology is a biological science, and literally means “disease-causing changes to body functions.” Disease is the deviation from the normal state of wellness, which considers not only the physical aspect of health, but the mental and social aspects as well. This course focuses on the physical aspects of disease in adults and children. Our knowledge about health and disease has built slowly over thousands of years of observing, studying, reporting, experimenting with, and comparing phenomena in an effort to improve the human quality of life. This is the **scientific method** of research and discovery that helps us explain the world we live in, and that lives within us.

This course investigates physical diseases and disorders, both genetic and acquired that affect the function of the major organ systems you learned about in Anatomy and Physiology I and II. Much of the information will already be familiar to you, but what isn’t familiar should easily connect to the knowledge base you bring with you. (That’s when it gets *really* interesting!)

As you’re aware, one of the biggest continuing challenges in learning about the human body is the vocabulary. Your foundation from A&P will be very helpful in understanding the new concepts and vocabulary in this course. You may even want to refer to your anatomy textbook for more information if needed for better understanding. Our textbook also includes anatomy and physiology review. We don’t cover all of those chapters; however, you can review them if needed.

Here too, constant exposure to the subject (revisiting the material frequently) is the best way to continue building your knowledge. By now, you may have developed some good study habits and found an approach that works well for you. I’m always happy to help with study strategies. Just let me know if you’d like additional help.

### **What’s involved with grading-**

Earning a good grade in any course isn’t difficult if you’re aware of and follow the course policies, have realistic expectations of yourself and your circumstances, complete all work to a high standard, and understand that you are responsible for your performance.

#### **Grading:**

Exams	30%
Discussions	35%
Assignments	<u>35%</u>
	100%

### **Calculating your own grade:**

All graded items are listed on the schedule. You should always know where you stand, grade-wise, in any course. There is more information about the graded items below and in Brightspace. You will see a “weighted grade-estimate” column in “grades”. This column is an ongoing calculation of grades; however, it only takes into account the items you have a grade for. For instance, if an assignment hasn’t been graded your grade may not be 100% accurate as this assignment wouldn’t be in the calculation.

Letter grades will be assigned based on the college's grading scale:

93%-100%=A	83%-86%= B	73%-76%= C	60%-66%= D
90%-92%= A-	80%-82%= B-	70%-72%= C-	below 60%=F
87%-89%= B+	77%-79%= C+	67%-69%= D	

### Assessments (exams):

Assessments in Brightspace come in the form of exams. All exams are graded, and they count toward your course grade. They are also timed, which means you must finish each one within its allotted time period. When time is up, the exam will no longer save the work completed after the allotted time. The **exams need to be completed in one sitting, so you cannot logout and then go back into them.**

I don't provide study guides for the exams since everyone has different study techniques that work for them. One great skill at the college level is to find the study technique that works for you, and also to create your own study guides. I'm happy to work with you on this too. Books and notes are allowed while taking the exams, however you may NOT use the internet, classmates, family members, or friends while taking the exam. Even though your book is allowed you need to have a good foundational knowledge of the content. You will need this knowledge in future courses and your career. The exam is also timed, so if you are relying on looking everything up you may not finish all the questions.

### Exams (30%):

Exams are intended to measure your understanding of the material. We will have 6 exams. For each exam, one attempt is available during the week the exam is in. The exams are timed and must be completed in one sitting. Questions come from the weekly readings, including instructional materials, and publisher materials (i.e., exam test banks, etc.). Exams will consist of multiple-choice questions.

**IMPORTANT NOTE:** Before taking an exam, be sure that you are logged into Brightspace **only**. Also, Firefox and Chrome seem to be the most stable browsers for Brightspace, so use it rather than Internet Explorer or Safari. **NOTE: No retakes or makeups are available for any exam unless in an extreme situation and approval must be given by the instructor prior to the due date.**

### Discussions (35%):

The weekly discussions are a little different than what you may be thinking by the title. These discussions aren't simply posting a question, answering, etc. Discussions in this course are a way to explore the information in the chapters further, as well as apply what you are learning about. You will also be adding new information and/or resources to a classmate's post each week. Applying and researching the information further will help with retention and recall of the information. Each weekly folder where there is a discussion includes a direct link to the discussion board, as well as a description of what to post for a discussion topic, etc.

Your initial post is due on Thursday at 11:59pm for the week it's in and the response post is due by Sundays at 11:59pm for the week it is in (except week 1-all items due by Sunday). Any post that is plagiarized will cause the entire participation grade for that week to be zero, so make sure you're summarizing into your own words. Quoted material earns no credit (since that isn't your own work). Some properly quoted material is okay, however make sure the material in your own words meets the grading criteria. **ALL posts MUST have a resource. If it's personal knowledge or work experience you must list that for your source.** More information about Discussions is available in Brightspace and in the grading rubric. Because each discussion grade includes BOTH your initial post, as well, as response posts, a grade will not be given until after Sundays when all posts are in.

I have included a General Question/Discussion area in the discussion board. Use this area to post general questions or comments such as navigating through the course, or regarding something you've read in the material. If you see a question you know the answer to feel free to respond. Feel free to use this section like a study group too. If you find a helpful website or have helpful tips, feel free to share here. Do not submit assignments here. This is an area for all of you to discuss things with one another and assist one another similar to what you would do in an on campus face-to-face class. I will periodically add to discussions in here, however it is mainly a section for all of you. If you have specific questions for me, you can always email me.

**Assignments (35%):**

You will have a variety of assignments during this course. Assignments are used in this course as a way to apply and utilize the information we are learning about in the chapters. There is a lot of detail in pathophysiology, so continued use and application can help you with retention of the information. Assignments include but are not limited to, chapter outline, creating an in-service, word search, journal article, patient information sheet, case studies, infographic, and a table. Assignments are due by Sunday at 11:59pm for the week they occur in. All assignments are scanned using the College's plagiarism software Turnitin.

***NOTE: You only get 1 attempt to upload your assignment file, so you need to be sure that what you want graded is what you've submitted, as well as all files/images/pages need to be uploaded in the single attempt. I will not accept assignments via email. They must be submitted in Brightspace.***

***IMPORTANT TIP:*** When you submit an assignment, make sure the file you're attaching isn't open on your computer. If it is, it may attach it as a blank document. You also don't want any special characters in the title as this may give you an error message. I recommend adding the word *final* to your file title. This way when you attach the file you know it's your completed file you want graded. You can see your file name before hitting submit. I also recommend not waiting until the last minute. I've found in the past some students waiting until the final minutes to submit and then running into an issue. If you submit earlier, I may be able to assist you. If you've made an error and need a re-submission, there will be a 5-point deduction. You must get approval for re-submission.

### Discussion Board Grading Rubric

*Each Post is worth up to 5 points: 1 point for each category. Please see columns .25, .5, .75, and 1.0 for details in earning full credit for each post*

Category	0	.25	.50	.75	1.0
<b>Content</b> Initial post	No post	Post does not relate to the discussion; doesn't answer discussion questions	Thoughts were partially developed and addressed some of the aspects relevant to the prompt	Thoughts were well developed and addressed basic aspects relevant to the prompt; demonstrated base knowledge of concepts.	Thoughts were well developed and fully addressed all aspects relevant to the prompt; demonstrated excellent integration of key concepts.
<b>Timeliness</b> Initial post	No post; post more than 7 days late	Initial post 3-7 days late	Initial post 2 days late	Initial post 1 day late	Initial post on time
<b>Research sources/Citations</b> Initial post  <i>NOTE: all posts need to include source used!</i>  <i>if you used just the text site the text; if it's personal knowledge state "personal knowledge/experience)</i>	No source	May answer question but does not contribute new material from source other than the textbook. Reference mentioned by name in the post, however not listed in APA or MLA format	References are made to the text and mention material outside of the textbook in 5-25% of the post. Partial reference using APA or MLA format; web address only	References are made to the text or other required reading in the post, and on occasion to other relevant resources. 25-50% of material relates to other sources than the textbook. Partial reference using APA or MLA format; web address only	Consistently contributes to class discussions by including related websites, current events noted in online publications, etc. (>50%) IN ADDITION to text and required reading references. Full proper APA or MLA format
<b>Professionalism/ Grammar</b> Initial post	Unprofessional language; plagiarized; all quotations and no summarized information	Poor spelling and grammar in (> 50% of post)	Moderate amount misspellings or poor grammar (25-50% of post)	Few grammatical or spelling errors (25% of post)	Consistently using correct grammar in post with rare misspellings (<25%)
<b>Responses to classmates</b>  <i>NOTE: You are only required to respond to one classmate, however, feel free to respond to more than one. Just make sure at least one response meets the grading criteria.</i>	No post	No response post; or post does not demonstrate thinking or questioning related to the online discussion; response post 3-7 days late; poor spelling and grammar in (> 50% of post)	Demonstrates little informed knowledge, thinking, and/or questioning; response post 2 days late; moderate amount misspellings or poor grammar (25-50% of post)	Demonstrates appreciation and questioning of other students' contributions and of the topic(s) at hand; some elaboration on the topic; adds new information to the post in the response; response post 1 day late; few grammatical or spelling errors (25% of post)	Demonstrates informed knowledge, analysis, in-depth thinking, and quality questioning of other students' contributions and of the topic(s) at hand; includes additional new information or resources in response; response post on time; consistently using correct grammar in posts with rare misspellings (<25%)

## Case Study Grading Rubric

Category	0	3	4	5
<b>Content</b>	No submission	A few of the concepts were addressed. Met partial elements of assignment instructions and requirements.	Most of the concepts were satisfactorily addressed. Mostly met assignment instructions and requirements.	All concepts were fully addressed. Met or exceeded assignment instructions and requirements.
<b>Analysis</b>	No submission	Superficial analysis of the information. Does not support ideas with rationale or outside references.	Analysis of the information was adequately developed. Ideas were supported with limited rationale and outside references.	Analysis of the information was well developed. Ideas were supported with a well thought out rationale using outside references and scholarly research to support facts.
<b>Clarity and Mechanics</b>	No submission	Submission presented in an unorganized or somewhat unorganized manner. Some clarity and/or grammar, spelling or punctuation errors.	Submission presented in an organized manner. Minor clarity, and/or grammar, spelling or punctuation errors.	Submission presented in a clear and concise manner. Excellent grammar, spelling, and punctuation.

## Schedule (Subject to change)

*Important Dates: 1/31 last day to drop; 4/1 last day to withdraw; 5/6 semester ends*

**NOTE: I have listed all of the chapters we will cover, some chapters we are covering the full chapter, while others we are only covering part of the chapter. Details are in the weekly folder. There are a lot of chapters in the text we do not cover; however, they are great for anatomy/physiology review of the system before you learn the diseases/disorders related to the system.**

Date	Topics	Items DUE	Due Date	Check when done
<b>Week 1</b> (1/18-1/23)	Welcome and Orientation	Discussion-Introduction/Week 1 Topic	Jan 23	
	<b>Ch 1:</b> Concepts of Health and Disease	Assignment-Chapter Outline	Jan 23	
		Discussion-Week 1-Response post	Jan 23	
<b>Week 2</b> (1/24-1/30)	<b>Ch 5:</b> Genetic and Congenital Disorders <b>Ch 6:</b> Neoplasia	Discussion Week 2-initial post	Jan 27	
		Assignment-Inservice	Jan 30	
		Discussion-Week 2-Response post	Jan 30	
<b>Week 3</b> (1/31-2/6)	<b>Ch 8:</b> Disorders of Fluid, Electrolyte, and Acid-Base Balance	Discussion Week 3-Initial post	Feb 3	
		Assignment-Table	Feb 6	
		Discussion Week 3-Response post	Feb 6	
<b>Week 4</b> (2/7-2/13)	<b>Ch 9:</b> Inflammation, Tissue Repair, and Wound Healing <b>Ch 12:</b> Disorders of the Immune Response	Discussion Week 4-initial post	Feb 10	
		Discussion Week 4-Response post	Feb 13	
		<b>Exam 1 (Ch 1, 5, 6, 8)</b>	Feb 13	
<b>Week 5</b> (2/14-2/20)	<b>Ch 15:</b> Disorders of Motor Function <b>Ch 16:</b> Disorders of Brain Function	Discussion Week 5-initial post	Feb 17	
		Assignment-Case Study-Parkinson's Disease	Feb 20	
		Discussion Week 5-Response post	Feb 20	
<b>Week 6</b> (2/21-2/27)	<b>Ch 23:</b> Disorders of Red Blood Cells <b>Ch 24:</b> Disorders of White Blood Cells and Lymphoid Tissues	Assignment-Patient Information Sheet	Feb 24	
		<b>Exam 2 (Ch 9, 12, 15, 16)</b>	Feb 27	
<b>Week 7</b> (2/28-3/6)	<b>Ch 26:</b> Disorders of Blood Flow and Blood Pressure Regulation	Discussion Week 7-Initial post	Mar 3	
		Assignment-Case Study-Disorders of Blood Flow	Mar 6	
		Discussion Week 7-Response post	Mar 6	
<b>Week 8</b> (3/7-3/13)	<b>Ch 27:</b> Disorders of Cardiac Function	Discussion Week 8-Initial post	Mar 10	
		Assignment-Case Study-Myocardial Infarction	Mar 13	
		Discussion Week 8-Response post	Mar 13	

Schedule continued

## Schedule Continued

Date	Topics	Items DUE	Due Date	Check when done
<b>Week 9</b> (3/14-3/20)	<b>Spring Break</b> -no new assigned work; study for the exam in week 9 and get a head start on the reading for next week			
<b>Week 10</b> (3/21-3/27)	<b>Ch 30:</b> Respiratory Tract infections, Neoplasms, and Childhood Disorders <b>Ch 31:</b> Disorders of Ventilation and Gas Exchange	Discussion Week 10-initial post	Mar 24	
		Assignment-Case Study-Influenza	Mar 27	
		Discussion Week 10-Response post	Mar 27	
		<b>Exam 3 (Ch 23, 24, 26, 27)</b>	Mar 27	
<b>Week 11</b> (3/28-4/3)	<b>Ch 33:</b> Disorders of Renal Function <b>Ch 34:</b> Acute Kidney Injury and Chronic Kidney Disease <b>Ch 35:</b> Disorders of the Bladder and Lower Urinary Tract	Discussion Week 11-initial post	Mar 31	
		Assignment-Case Study-Urinary Incontinence	Apr 3	
		Discussion Week 11-Response post	Apr 3	
<b>Week 12</b> (4/4-4/10)	<b>Ch 37:</b> Disorders of Gastrointestinal Function	Discussion Week 12-initial post	Apr 7	
		Discussion Week 12-Response post	Apr 10	
		<b>Exam 4 (Ch 30, 31, 33, 34, 35)</b>	Apr 10	
<b>Week 13</b> (4/11-4/17)	<b>Ch 38:</b> Disorders of hepatobiliary and Exocrine Pancreas Function <b>Ch 39:</b> Alterations in Nutritional Status	Discussion Week 13-Initial post	Apr 14	
		Assignment- Case Study-Anemia	Apr 17	
		Discussion Week 13-Response post	Apr 17	
<b>Week 14</b> (4/18-4/24)	<b>Ch 41:</b> Disorders of Endocrine Control of Growth and Metabolism	Discussion Week 14-Initial post	Apr 21	
		Assignment-Journal Article	Apr 24	
		Discussion Week 14-Response post	Apr 24	
		<b>Exam 5 (Ch 37, 38, 39)</b>	Apr 24	
<b>Week 15</b> (4/25-5/1)	<b>Ch. 50:</b> Disorders of Musculoskeletal Function: Rheumatic Disorders <b>Ch. 52-</b> Disorders of Skin Integrity and Function	Discussion Week 15-initial post	Apr 28	
		Assignment- Infographic	May 1	
		Discussion Week 15-Response post	May 1	
<b>Week 16</b> (5/2-5/6)	<b>Wrapping Up-Final Week</b>  <b>Semester ends on a FRIDAY!</b>	<b>Exam 6 (Ch 41, 50, 52)</b>	May 6	

**Questions and discussions are encouraged all the time, anytime. If you need help developing a schedule, time management, study strategies, etc. please reach out to me. I'm happy to help.**