

**Instructor Information**

Name	Julie González	E-mail address	<a href="mailto:jegonzalez2@dmacc.edu">jegonzalez2@dmacc.edu</a>
Phone number	(515) 964-6379	Fax number	(515) 965-7083
Office location	Building 4; Room 11A	Office hours	M & W 11:05-1:25pm
Web page	<a href="http://www.dmacc.edu/Instructors/jegonzalez2/">http://www.dmacc.edu/Instructors/jegonzalez2/</a>		

**Course Information**

Semester	Summer	Year	2009
Course title	Microbiology		
Course number	BIO 187	Credits	3 (includes lab)
Section number	A	CRN number	30542
Days & Time	M & W 9:40-11:05am T & R 9:40-12:40pm	Location	Ankeny Campus Bld. 4 Room 02
Course description	A general microbiology course with laboratory designed for the science major. Emphasis is placed on microbial morphology, physiology, microbial genetics, virology and basic immunology. Prerequisite: One semester of any college-level Biology.		
Course competencies	<a href="http://www.dmacc.edu/competencies/">http://www.dmacc.edu/competencies/</a>		

**Textbooks & Materials**

Required textbooks	Lecture: <u>Brock Biology of Microorganisms</u> . 12 <sup>th</sup> ed Madigan/Martinko/Parker 2008 Lab: <u>Microbiology Laboratory Theory &amp; Applications</u> (Brief ed) Leboffe & Pierce 2008
Required materials	Sharpie marker, Basic Calculator (no cell phones)

**Course Policies**

Attendance	Regular attendance is essential for success in this course. Absence and tardiness interfere with the learning process, <i>even if for legitimate reasons</i> . <ul style="list-style-type: none"> <li>Daily Participation slips will help track attendance.</li> <li>Repeated tardiness is not acceptable.</li> <li>If you miss a class: You are responsible for any material covered and any assignments given. Call a friend, get the assignment, and be prepared for the next class. It is your responsibility to stay caught-up in this course.</li> <li>Announced and unannounced quizzes and in-class assignments will be given at the instructor's discretion. <ul style="list-style-type: none"> <li>Missed quizzes and in-class assignments <u>cannot</u> be made up this includes missing a quiz due to tardiness.</li> </ul> </li> </ul>
Lecture	Attached is a general lecture outline for the course. You are responsible for taking notes and reading the assigned chapters in your textbook. If you miss a class, you will have to get the notes, handouts and find out about any announcements from someone in your class. Lecture exams and final will be administered according to the tentative dates on the outline.
Lab	Attached is a tentative lab schedule. You are required to attend each lab, participate in and complete all activities during the lab period. Failure to be actively involved in lab activities results in a loss of points. A completed lab report for the previous lab session is due at the beginning of the next lab session. Late lab reports can receive a maximum of 50% of their value. You can receive no points for a lab that you did not attend!
Lab Safety	Laboratory safety is of paramount importance. It is essential that you follow proper procedures at all times. Some of the microorganisms you will be handling are pathogenic! No food, drink, tobacco or gum can be permitted in the lab. A lab coat or smock must be worn during lab sessions. Safety glasses or goggles must be worn when working with live cultures.
Instructor Communication	All course information sent to students will be sent to your DMACC e-mail account. If you have not yet set up the account or are unable to access it contact the help desk at 515-965-7300 or 1-800-362-2127, ext. 7300.

Study expectations	Learning happens in the minds of individuals. It is not the doing that causes learning; it is the thinking about the doing, the thinking about the experience that causes learning. Therefore, <b>each of you is responsible for your own learning</b> . All experiences and assignments for this course have been designed to promote your acquisition of enduring understandings about the course content. You are not doing any of the assignments for me; you are doing them for yourself. And, <b>you deserve to do high quality work for yourself</b> .																										
Assignments	Homework will be assigned throughout the semester. These may include (but are not limited to) working problems, brief oral presentations, current literature searches, etc. Specific assignments will be made at appropriate times throughout the course. <ul style="list-style-type: none"> <li>• All work handed in must be neatly and properly done. <ul style="list-style-type: none"> <li>○ Assignments will not be accepted if they are messy.</li> <li>○ When writing answers, you must be certain that you have answered all parts of a question.</li> <li>○ If you do not understand an assignment or a question, it is your responsibility to look for help.</li> </ul> </li> </ul> You may come to me, go to the tutoring center or ask a friend. But your not understanding something will not be accepted as an excuse for incomplete work.																										
Late assignments	Missed lab exercises, in class activities and quizzes cannot be made up this includes missing them due to tardiness. Some outside lecture assignments may be accepted up to two in-session days after the due date, the score will be reduced by 30%.																										
Exams	Lecture examinations will cover the textbook; material presented in lecture, activities and related readings. Each student is responsible for the contents of the textbook and supplemental material unless the instructor specifically desires to omit a certain portion of material. <ul style="list-style-type: none"> <li>• If you know in advance you will miss an exam you may take <u>one</u> exam ahead of time with no penalty.</li> <li>• Only <u>one</u> exam not taken at the scheduled time may be made-up within two weeks; however the <u>overall score is lowered for by 10% for each week the exam is not completed</u>. <ul style="list-style-type: none"> <li>○ For example, if the exam is taken during the first week a score of 80% will automatically become a score of 70%; the second week a score of 80% will be recorded as a score of 60%. If an examination is not made-up within two weeks of the original exam date, a grade of zero will be given for the missed examination.</li> </ul> </li> </ul>																										
Alternate activities & class cancellations	You will always receive notification of alternate activities and class cancellations. Notice can be given in advance via in-class announcements or e-mail and for unanticipated events a notice will be posted on the classroom door.																										
Classroom conduct	"Students are expected to conduct themselves in such a manner as to show respect for faculty, staff and fellow students, exhibit and maintain integrity and honor in all matters related to the College and not interfere with or disrupt the orderly educational processes of the College." For additional information refer to the DMACC Student Handbook: <a href="http://www.dmacc.edu/handbook/welcome.asp">http://www.dmacc.edu/handbook/welcome.asp</a>																										
Grading criteria	Grades will be assigned according to the following scale: <table style="margin-left: 20px; border: none;"> <tr> <td>100-90</td> <td>A</td> <td>89-87</td> <td>B+</td> <td>86-84</td> <td>B</td> <td>83-80</td> <td>B-</td> </tr> <tr> <td></td> <td></td> <td>79-76</td> <td>C+</td> <td>75-71</td> <td>C</td> <td>70-66</td> <td>C-</td> </tr> <tr> <td></td> <td></td> <td>65-62</td> <td>D+</td> <td>61-58</td> <td>D</td> <td>57-55</td> <td>D-</td> <td>0- 54</td> <td>F</td> </tr> </table> <ul style="list-style-type: none"> <li>• Students can keep track of their own grades using returned assignments or they may use the following website, which will be updated throughout the semester.</li> <li>• Grades may be viewed online at: <a href="http://www.eclassinfo.com">http://www.eclassinfo.com</a></li> <li>• This is a secure website which keeps track of grades, assignments and attendance. The information is private so that only you can view your grades online using an individual <u>Student ID and Password</u>.</li> </ul> If you ever forget, misplace or wish to change your ID and Password contact me.	100-90	A	89-87	B+	86-84	B	83-80	B-			79-76	C+	75-71	C	70-66	C-			65-62	D+	61-58	D	57-55	D-	0- 54	F
100-90	A	89-87	B+	86-84	B	83-80	B-																				
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		65-62	D+	61-58	D	57-55	D-	0- 54	F																		


Weather policy	<p>“Individual circumstances such as health, childcare, rural roads, distance from the College, etc. can vary greatly among students and staff. It is always DMACC’s goal to provide safe learning conditions, as well as provide the opportunity for students to attend classes when the vast majority is able to safely attend. The final decision to come to College can only be made by the individual student based on their specific extenuating circumstances that may make it unsafe for them to travel. During adverse weather, DMACC faculty is considerate of students who are unable to attend classes due to unique extenuating circumstances. It is the responsibility of each faculty member to notify their students (in addition to their dean or provost) through some predetermined means if they are must postpone or cancel a specific class due to weather or illness.”</p> <ul style="list-style-type: none"> <li>• If the campus is closed due to inclement weather, check your <u>DMACC email</u> for instructions from me for problems or assignments which will be due for the next class period.</li> </ul>
Academic dishonesty	<p>“Academic integrity, doing one’s own work in course assignments and in tests, is one of the most important values in higher education. Receiving credit for plagiarizing or cheating violates the value of all degrees conferred. It is unacceptable for students to submit another person’s work as their own. If students quote, summarize, paraphrase or use an author’s idea, they must acknowledge the source, otherwise they are plagiarizing. <b>Allowing others to accept credit for work not their own in tests or in written and oral reports is also cheating.</b> Students who plagiarize or cheat will be held accountable by their instructor and are subject to the following sanctions.”</p> <ul style="list-style-type: none"> <li>• All incidences of academic dishonesty, based on my perception, will be reported to the college. During this course the first offence will result in a 0 for the work and the second offence will result in an F for the course. Severe offences may result in an immediate F for the course.</li> </ul> <p>For additional information refer to the DMACC Student Handbook:  <a href="http://www.dmacc.edu/handbook/welcome.asp">http://www.dmacc.edu/handbook/welcome.asp</a></p>

**DMACC Information Web Sites**

DMACC home page	<a href="http://www.dmacc.edu/">http://www.dmacc.edu/</a>
Instructor home pages	<a href="http://www.dmacc.edu/Instructors/jegonzalez2/">http://www.dmacc.edu/Instructors/jegonzalez2/</a>
Admissions & registration	<a href="http://www.dmacc.edu/potenti.asp">http://www.dmacc.edu/potenti.asp</a>
Cellular phone use statement	<a href="http://www.dmacc.edu/student_services/cellphone.asp">http://www.dmacc.edu/student_services/cellphone.asp</a>
WebCT	<a href="http://webct.dmacc.edu/webct/public/home.pl">http://webct.dmacc.edu/webct/public/home.pl</a>
Student handbook	<a href="http://www.dmacc.edu/handbook/welcome.asp">http://www.dmacc.edu/handbook/welcome.asp</a>
Add/drop dates	<a href="http://www.dmacc.edu/registration/add_drop.asp">http://www.dmacc.edu/registration/add_drop.asp</a>
Refund policy	<a href="http://www.dmacc.edu/refund.asp">http://www.dmacc.edu/refund.asp</a>

**Support Services**

Accommodations	<p>“It is the policy of DMACC to accommodate students with disabilities. Any student with a documented disability who requires reasonable accommodation should contact the special needs coordinator at 515-964-6850 voice or 515-964-6810 TTY.”</p>
Services for students with disabilities	<p><a href="http://www.dmacc.edu/student_services/disabilities.asp">http://www.dmacc.edu/student_services/disabilities.asp</a></p> <p>Contact the special needs coordinator at <b>515-964-6850V</b>, <b>515-964-6809 TTY</b> or the counseling &amp; advising office on any campus for an Application for Accommodation.</p>
Academic & educational advising	<a href="http://www.dmacc.edu/advising/welcome.asp">http://www.dmacc.edu/advising/welcome.asp</a>
Career counseling	<a href="http://www.dmacc.edu/counseling/">http://www.dmacc.edu/counseling/</a>
Library	<p><a href="http://www.library.dmacc.edu/">http://www.library.dmacc.edu/</a></p> <p><b>Building 6, room 3</b>  Monday – Thursday 7:30 am to 9:00 pm  Friday – 7:30 am to 4:00 pm  Saturday – 8:00 am to 1:00 pm</p>

Academic Achievement Center	<a href="http://www.dmacc.edu/student_services/academic_achievement_center.asp">http://www.dmacc.edu/student_services/academic_achievement_center.asp</a> Provides academic assistance for students on a drop-in basis. Also serves as a make-up testing center. 515-964-6558 or 1-800-362-2127 ext. 6558 <b>Building 6, Room 20</b> Monday – Thursday 8:00 am to 7:00 pm Friday – 8:00 am to 2:30 pm <b>NOTE:</b> Summer hours may vary
Online Tutoring	<b>SMARTHINKING Online Tutoring at DMACC!!</b>  <b><i>Don't forget DMACC's free on-line tutoring service that you can log on to at any time!</i></b> Smarthinking provides tutoring in a variety of subjects. You can connect with an e-structor and interact with a live tutor, submit your writing for any class to their Online Writing Lab, and submit a question and receive a reply from a tutor. For more information go to <a href="http://www.dmacc.edu/smarthinking.asp">http://www.dmacc.edu/smarthinking.asp</a> . Contact the DMACC Tutoring Office (Monday-Friday from 8:00 a.m. – 4:00 p.m.) at 515-964-7004 or 1-800-362-2127 ext. 7004 or email at <a href="mailto:tutor@dmacc.edu">tutor@dmacc.edu</a> and receive a DMACC SMARTHINKING user ID and Password. Your SMARTHINKING account will allow a maximum usage of 140 minutes per semester. Your password will be valid for one semester. For further information contact Sharon Bittner, Program Development Director, at <a href="mailto:sgbittner@dmacc.edu">sgbittner@dmacc.edu</a>
Computer labs	<a href="http://www.dmacc.edu/helpdesk/pc_labs.htm">http://www.dmacc.edu/helpdesk/pc_labs.htm</a> <b>Building 6</b> Monday – Thursday 7:30 am to 10:00 pm Friday – 7:30 am to 4:00 pm Saturday – 7:30 am to 1:00 pm

**Disclaimer**

“This syllabus is representative of materials that will be covered in this class; it is not a contract between the student and the institution. It is subject to change without notice. Any potential exceptions to stated policies and requirements will be addressed on an individual basis, and only for reasons that meet specific requirements. If you have any problems related to this class, please feel free to discuss them with me.”

**Nondiscrimination Policy**

Des Moines Area Community College shall not engage in or allow discrimination covered by law. This includes harassment based on race, color, national origin, creed, religion, gender, sexual orientation, age, and disability. Veteran status in educational programs, activities, employment practices, or admission procedures is also included to the extent covered by law. Individuals who believe they have been discriminated against may file a complaint through the College Discrimination Complaint Procedures. Complaint forms may be obtained from the DMACC Web site, the Ombudsperson, Judicial Officer, Human Resources Department, the campus Provost's Offices, and Academic Deans' Offices.

Students who wish additional information or assistance may contact the **Executive Dean, Student Services, Laurie Wolf**, Building 1, 515-964-6437 or the **EEO/AA Officer, Dr. Sandy Tryon**, Human Resources, Bldg. 1, 515-964-6301 or they may refer to Student Services procedure 4645 located on the DMACC Intranet at <http://my.dmacc.edu/procs.aspx> . Go to Policies & Procedures and choose Student Services Procedures. Employees and applicants who wish additional information or assistance may contact the **EEO/AA Officer, Dr. Sandy Tryon**, Human Resources, Bldg. 1, 515-964-6301 or refer to HR Procedures 3000, 3005, 3010, 3015, and 3020 at <http://www.dmacc.edu/hr/hrpp.asp> .

For requests for accommodations, the **Accommodation/Section 504/ADA Coordinator, Sharon Bittner**, can be contacted at 515-964-6857. Students with requests for accommodations should refer to the Student Services procedure 4610 located on the DMACC Intranet at <http://my.dmacc.edu/default.aspx> . Go to Policies & Procedures and choose Student Services Procedures.

Microbiology Monday & Wednesday 9:40-11:05 Tentative Lecture Schedule for Summer 2009				
Week	Date	Day	Topic	Chapter
1	May 27	W	Overview of Microbiology	1
				2
2	Jun 1	M	Chemistry of Cellular Components	3
	3	W	Cell Structure & Function	4
			Nutrition & Metabolism	5
3	8	M	Microbial Growth	6
	10	W	<b>Exam 1</b>	
4	15	M	Essentials of Molecular Biology	7
	17	W	Regulation of Gene Expression	9
5	22	M	Bacterial Genetics	11
	24	W	Genetic Engineering	12
6	29	M	Viruses	10
	Jul 1	W	<b>Exam 2</b>	
7	6	M	Bacteria	15 & 16
	8	W	Archaea	17
8	13	M	Eukaryotic Microorganisms	18
	15	W	<b>Exam 3</b>	
9	20	M	Microbial Ecology	20-24
	22	W	Microbial Ecology (cont.)	
10	27	M	Microbial Growth Control	27
	29	W	Immunology	29
11	Aug 3	M	Epidemiology	33
	5	W	<b>Comprehensive Final Exam</b>	
This is the approximate schedule we will follow. The instructor reserves the right to alter this schedule as necessary during the course of the semester, including the dates and number of exams.				

Week	Date	Day	Microbiology Tuesday & Thursday 9:40-12:40 Tentative LAB Schedule for Summer 2009
1	May 28	R	Laboratory Orientation and Safety (Lab Manual pages 1-5) Ex. 3-1 Introduction to the Light Microscope Ex. 3-3 Examination of Eukaryotic Microbes
2	Jun 2	T	Ex. 1.1 Glo Germ Hand Wash Education System Ex. 1-3 Common Aseptic Transfers and Inoculation Methods Ex. 3-10 Wet Mount and Hanging Drop Preparations
	4	R	Analysis of Experiment 1-3 Ex. 3-4 Simple Stain Ex. 3-5 Negative Stain Ex. 3-6 Gram Stain
3	9	T	Ex. 3-7 Acid-Fast Stain Ex. 3-8 Capsule Stain Ex. 3-9 Endospore Stain Ex. 3-11 Flagella Stain
	11	R	Ex. 3-12 Morphological Unknown Ex. 2-1 Ubiquity of Microorganisms
4	16	T	Analysis of Ex. 2-1 Ex. 2-2 Colony Morphology Ex. 1-4 Streak Plate Methods of Isolation Ex. 2-5 Evaluation of Media
	18	R	Evaluate Ex. 1-4 & 2-5 Selective Media – Exercises Ex. 4-1 Mannitol Salt Agar Ex. 4-2 Phenylethyl Alcohol Agar Ex. 4-4 Eosin Methylene Blue Agar Ex. 4-5 Hektoen Enteric Agar Ex. 4-6 MacConkey Agar
5	23	T	Analysis of Selective Media exercises Carbohydrate Metabolism : Ex. 5-1 Oxidation-Fermentation Test Ex. 5-2 Phenol Red Broth Ex. 5-3 Methyl Red and Voges Proskauer Tests Ex. 5-7 Citrate Test Ex. 5-11 Starch Hydrolysis
	25	R	Analysis of Carbohydrate metabolism exercises Protein Metabolism : Ex. 5-8 Decarboxylation Test Ex. 5-9 Phenylalanine Deaminase Test Ex. 5-12 Urea hydrolysis Ex. 5-14 Gelatin Hydrolysis

6	30	T	Analysis of Protein metabolism exercises
			Ex. 5-4 Catalase Test
			Ex. 5-5 Oxidase Test
			Ex. 5-6 Nitrate Reduction Test
			Ex. 5-22 Motility Test
			Ex. 9-5 Enterotube II
	Jul 2	R	Analysis of Exercises 5-4, 5-5, 5-6, 5-22, & 9-5
7	7	T	Identification of Unknown Microorganism - <u>Handout</u>
	9	R	Unknowns - continued
8	14	T	Unknowns – conclusion
			Ex. 2-6 Thioglycollate Medium
			Ex. 2-7 Anaerobic Jar
	16	R	Analysis of Aerotolerance exercises
			Ex. 6-1 Standard Plate Count
			Ex. 7-2 Antimicrobial Susceptibility Test (Kirby-Bauer Method)
9	21	T	Analysis of exercise 6-1
			Ex. 7-6 Multiple Tube Fermentation Method for Total Coliform Determination
			Analysis of exercise 7-2
	23	R	Ex. 6-3 Plaque Assay
			Ex. 8-3 Bacterial Transformation: the pGLO system
10	28	T	Analysis of exercise 7-6 & 6-3
			Evaluate exercise 8-3 (Bacterial Transformation lab)
			Ex. 7-3 MMWR Report
			Ex. 7-4 Epidemic simulation
	30	R	DNA Restriction Analysis – <u>Handout</u>
			Evaluation of 7-4
11	Aug 4	T	Evaluate DNA Restriction analysis
			Lab Cleanup/Review
			Ex.7-3 Due
	6	R	<b>PRACTICAL EXAM</b>
<p>This is the approximate schedule we will follow.  The instructor reserves the right to alter this schedule as necessary during  the course of the semester.</p>			

## Study Buddy Contact Info

As stated in this syllabus “You are responsible for any material covered and any assignments given. Call a friend, get the assignment, and be prepared for the next class. It is your responsibility to stay caught-up in this course.”

To assist you with this you must find at least three students in your class who you will contact if you miss a class. Your study buddy can give you notes explain any assignments and pick up handouts for you.

### Study Buddy #1

Name \_\_\_\_\_

Email \_\_\_\_\_

Phone \_\_\_\_\_

### Study Buddy #2

Name \_\_\_\_\_

Email \_\_\_\_\_

Phone \_\_\_\_\_

### Study Buddy #3

Name \_\_\_\_\_

Email \_\_\_\_\_

Phone \_\_\_\_\_

### Study Buddy #4 (optional)

Name \_\_\_\_\_

Email \_\_\_\_\_

Phone \_\_\_\_\_

Study Buddy Assignment (4 pts)

As you find at least three Study Buddies fill out:

1. Turn in this page for today's in-class assignment.
  - a. Remember to fill out the back side
2. Keep the Study Buddy Contact info page at the back of your syllabus.

Your Name: \_\_\_\_\_

Activities, clubs, organizations, etc. you plan to be involved in this semester \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

Study Buddy #1

Name \_\_\_\_\_

One thing you have in common with this classmate \_\_\_\_\_

\_\_\_\_\_

Study Buddy #2

Name \_\_\_\_\_

One thing you have in common with this classmate \_\_\_\_\_

\_\_\_\_\_

Study Buddy #3

Name \_\_\_\_\_

One thing you have in common with this classmate \_\_\_\_\_

\_\_\_\_\_

Study Buddy #4 (optional)

Name \_\_\_\_\_

One thing you have in common with this classmate \_\_\_\_\_

\_\_\_\_\_

Student Information Form – BIO-104, Summer 2009

Please complete the following by printing or writing legibly.

Name: \_\_\_\_\_ Phone number(s): \_\_\_\_\_

Hometown/Country of Origin: \_\_\_\_\_

Describe your career plans:

Why are you taking this course?

Describe your science and math preparation. (What courses have you taken in high school and college?):

Please feel free to indicate any comments or questions you have for me regarding this course:

**PLEASE READ THE FOLLOWING CAREFULLY BEFORE SIGNING!**

I have received the syllabus for the course indicated above. I have or will read it. I am aware of the following course policies:

- ✓ Attendance
- ✓ Lecture
- ✓ Lab and lab safety
- ✓ Instructor communication
- ✓ Study expectations
- ✓ Assignments and late assignment policies
- ✓ Exams and late exam policies
- ✓ Alternate activities & class cancellations
- ✓ Classroom conduct
- ✓ Grading criteria
- ✓ Weather policy
- ✓ Academic dishonesty and consequences
- ✓ Resources for additional information, accommodations and services

By signing and dating this form in the space below I am indicating understanding and agreement with the above statements.

Signed: \_\_\_\_\_ Date: \_\_\_\_\_