N	ew ourse	Drop Course	Course Change	Distance Learning	Syllabus	New UG Program	Change UG Program	New/Change Minor UG	New Master Program	Change Master Program	New Doctoral Program	Doctoral	Program Suspension/Close
---	-------------	----------------	------------------	----------------------	----------	-------------------	-------------------------	------------------------	--------------------------	-----------------------------	----------------------------	----------	--------------------------

Open in full window.

Approved by Undergraduate Council 3/20/2012 Sharon Gill

### Attachments:

no file selected

	ID	Attachment
<u>Delete</u>	86	CHE 231_Syllabus_Fall_2012.pdf
<u>Delete</u>	87	CHE 231 001 schedule Fall 2012.pdf
<u>Delete</u>	91	A Proposal to Change CHE 231 and 233.pdf
		1

# **COURSE CHANGE FORM**

NOTE: Start form entry by choosing the Current Prefix and Number (\*denotes required fields)

	Current Prefix and Number:		Proposed Prefix & Number:
*	What type of change is being proposed?		Major Change Distance Learning Only Minor – change in number within the same hundred series, exception 600–799 the same "hundred series" Minor – editorial change in course title or description which does not imply change in content or emphasis Minor – a change in prerequisite(s) which does not imply a change in course content or emphasis, or which is made necessary by the elimination or significant alteration of the prerequisite(s) Minor – a cross listing of a course as described above
Does the change make the course a UK Core course? Yes No  If YES, check the areas that apply:  Inquiry - Arts & Creativity Composition & Communications - II  Inquiry - Humanities Quantitative Foundations  Inquiry - Nat/Math/Phys Sci Statistical Inferential Reasoning			Communications – II undations

	Inquiry – Social Sciences	U.S. Citizenship,	, Community, Di	versity			
	Composition & Communication	ons – I Global Dynamics	s				
1.	General Information.						
a.	Submitted by the College of:			Т	oday's Date:		
b.	Department/Division:						
с.*	Is there a change in "ownership" o	of the course?					
	Yes No If YES, what colle	ege/department will offer t	he course instea	ıd?			
e.*	* Contact Person Name:			Email:	Phone		
	* Responsible Faculty ID (if different	ent from Contact)		Email:	Phone	:	
f.*	Requested Effective Date:	Semester Follo	owing Approval	OR	Specific Term: <sup>2</sup>		
2.	Designation and Description of	Proposed Course.					
a.	Current Distance Learning(DL) Sta	tus:	N/A Already app Please Add Please Drop	roved for DL*			
	*If already approved for DL, the Distance	Learning Form must also be sub	mitted <u>unless</u> the d	epartment affirms (by checki	ing this box ) that the prop	posed chang	es do not affect DL delivery.
b.	Full Title:			Proposed Title: *			
c.	Current Transcript Title (if full ti	itle is more than 40 charac	ters):				
C.	Proposed Transcript Title (if full t	itle is more than 40 charac	ters):				
d.	Current Cross-listing:	N/A	OR	Currently <sup>3</sup> Cross-liste	ed with (Prefix & Num	ber):	
	Proposed - ADD <sup>3</sup> Cross-listing (P	refix & Number):					
	Proposed - REMOVE 3,4 Cross-lis	ting (Prefix & Number):					
e.	Courses must be described by a	<u>it least one</u> of the meeting	g patterns belo	w. Include number of	actual contact hours	5 for eac	h meeting pattern type.
Curr	rent: Lecture	Laboratory <sup>5</sup>	Recita	tion	Discussion	Ir	ndep. Study
	Clinical	Colloquium	Practio	cum	Research	R	esidency
	Seminar	Studio	Other		Please explair	n:	

Pro <sub>l</sub>	oosed:	ed: Lecture		Laboratory <sup>5</sup>		Recitation	Discussion	Indep. Study	
		Clinical		Colloquium		Practicum	Research	Residency	
		Seminar		Studio		Other	Please explain:		
f.	Current Grading System:								
	Propo	sed Grad	ling System:*		Letter (A, B, C, Pass/Fail	, etc.)			
g.	Current number of credit hours:  Proposed number of credit hours:*								
h.*	Curre	ently, is t	his course repeata	ble for addition	al credit?			Yes No	
*	Propo	sed to be	repeatable for add	ditional credit?				Yes No	
	If YES: Maximum number of credit hours:								
	If YES: Will this course allow multiple registrations during the same semester?				Yes No				
i.	Curre	ent Cours	e Description for	Bulletin:					
*	Proposed Course Description for Bulletin:								
	.,								
i.	Curre	ent Prere	quisites, if any:						

*	Proposed Prerequisites, if any:			
*				
k.	Current Supplementary Teaching Component, if any:	Community-Based Exper Service Learning Both	ience	
	Proposed Supplementary Teaching Component:	Community-Based Exper Service Learning Both No Change	ience	
3.	Currently, is this course taught off campus?		Yes	No
*	Proposed to be taught off campus?		Yes	No
	If YES, enter the off campus address:			
4.*	Are significant changes in content/student learning outcomes of the course being proposed?		Yes	No
	If YES, explain and offer brief rationale:			
5.	Course Relationship to Program(s).			
a.*	Are there other depts and/or pgms that could be affected by the proposed change?		Yes	No

	If YES, identify the depts. and/or pgms:		
b.*	Will modifying this course result in a new requirement <sup>™</sup> for ANY program?	Yes	No
	If YES <sup>Z</sup> , list the program(s) here:		
6.	Information to be Placed on Syllabus.		
a.	Check box if changed to 400G or 500 level course you must send in a syllabus and you must include the differentiation betwee students by: (i) requiring additional assignments by the graduate students; and/or (ii) establishing different grading graduate students. (See SR 3.1.4.)	en underg criteria in	raduate and graduate the course for

<sup>111</sup> See comment description regarding minor course change. Minor changes are sent directly from dean's office to Senate Council Chair. If Chair deems the change as "not minor," the form will be sent to appropriate academic Council for normal processing and contact person is informed.

<sup>[2]</sup> Courses are typically made effective for the semester following approval. No course will be made effective until all approvals are received.

Signature of the chair of the cross-listing department is required on the Signature Routing Log.

A Removing a cross-listing does not drop the other course - it merely unlinks the two courses.

Generally, undergrad courses are developed such that one semester hr of credit represents 1 hr of classroom meeting per wk for a semester, exclusive of any lab meeting. Lab meeting generally represents at least two hrs per wk for a semester for 1 credit hour. (See SR 5.2.1.)

<sup>[6]</sup> You must also submit the Distance Learning Form in order for the course to be considered for DL delivery.

<sup>[7]</sup> In order to change a program, a program change form must also be submitted.

A Proposal to Revise the Curriculum for CHE 231 and 233 (Organic Laboratory 1 and 2) and to Change Each from 2 Credit Hours to 1 Credit Hour

# Background.

Currently, our organic laboratory program consists of two 2-credit courses, CHE 231 and CHE 233. These courses are required for a number of different majors and for several popular pre-professional programs, and as a result the enrollment includes students from a diverse array of majors. For example, in the fall 2010 semester, CHE 231 had an enrollment of 369 students, representing over 25 different academic majors. The most dominant major was Biology, with 151 students enrolled (41% of the class), with Human Nutrition (29 students, 8%) and Chemistry (20 students, 5%) as distant 2<sup>nd</sup> and 3<sup>rd</sup>. Similarly, in the spring of 2011, the enrollment in CHE 233 was 258 students from 25 different majors, of which 108 were Biology majors (42%), with Human Nutrition (37 students, 14%) and Chemistry (20 students, 8%) as the 2<sup>nd</sup> and 3<sup>rd</sup> best represented.

It is clear that the majority of the interest in organic chemistry laboratory stems from student career interest in medicine, pharmacy, dentistry, and other life sciences. It is likely that many of the students who take CHE 231 and 233 are interested in medical school or pharmacy schools, and the UK Medical School and the UK College of Pharmacy require "Two courses in organic chemistry with laboratory." The amount of lab credit is not specified. There is no obvious requirement that there must be a total of 4 credits of laboratory, and it is likely that most students are taking more laboratory hours than necessary. It is hard to justify requiring the extra time for students who are already struggling to complete their degree programs in a timely manner.

This proposal involves a revision of CHE 231 and 233 to modernize the curriculum and to reduce the hours from 2 credits to 1 credit for each course. Students who are interested in more extensive laboratory experience have the option to take upper-division lab courses, including CHE 412G (Inorganic Chemistry Laboratory), CHE 441G (Physical Chemistry Laboratory), CHE 533 (Qualitative Organic Analysis Laboratory), or CHE 554 (Biological Chemistry Laboratory).

# **Proposed Change**

As they are now composed, CHE 231 and CHE 233 each meet for a total of 6 hours per week, which often includes laboratory lectures and quizzes. In a typical semester, these labs would meet 28 – 30 times (depending on the semester and the timing of holidays). The proposed change will reduce this to one 3-hour meeting per week and 14 – 15 class meetings over the semester. However, for CHE 231, a majority of the pedagogy will be retained and only a few of the current CHE 231 experiments will be dropped. By moving to a system in which the simple glassware required for CHE 231 is provided from communal stock in the laboratory, two class meetings can be saved and utilized for learning. By shortening the course, we feel that only one class meeting needs to set aside for make-up labs instead of two class meetings.

The proposed change to CHE 231 de-emphasizes organic synthesis in favor of a focus on the techniques of organic chemistry, and these techniques are relevant to a broad

range of different kinds of organic compounds, from biological compounds to organic materials. All of the current 'techniques' lab exercises will be retained, and we will create a column chromatography lab from sections of an experiment that we taught in previous years. Experiments that involve synthesis, particularly multi-step synthesis, will be shifted to CHE 233.

The second semester course, CHE 233, has not undergone a major revision within the memory of the current organic faculty. Much of the semester is dedicated to organic qualitative analysis, an antiquated set of methods for characterization of organic compounds. Instrumental methods have completely replaced 'wet' chemical tests. This proposal calls for a major modernization of the curriculum within a shorter, 1-credit course, replacing the focus on organic qualitative analysis with a series of locally-developed experiments that provide students with a chance to use the techniques they learned in CHE 231 while handling biological compounds (peptides and triglycerides) as well as organic electronic materials (TIPS-pentacene) and polymers.

The overall change will better satisfy the interests and needs of the broad constituency of majors that use the organic lab sequence, while significantly reducing the time required and the range of hazardous compounds that the students will encounter. All of these changes are long overdue.

It is possible that one or another of the degree programs that require CHE 231 and CHE 233 as part of the major requirements will really want their students to have 4 credits of organic laboratory experience. This is not a major problem, as those students could take any one of several 2-credit laboratory courses (CHE 412G, 441G, 533, or 554), and end up with the same number of credit hours.

The next few pages list the *Current* and the *Proposed* content for both CHE 231 and CHE 233 (to provide a comparison of the old and the new), and the last page shows the complete *proposed* two-course sequence.

Lab Meetings 1 – 4

- · Orientation and safety
- Lab Check-in
- Recrystallization and melting points

Lab Meetings 6 - 8

 Solvent Extraction and Thin-Layer Chromatography/melting points

Lab meetings 9 – 11

 Distillation and Gas Chromatography

Lab Meetings 12 – 13

 Chemical Reactions: Borohydride Reduction

Lab Meeting 14

· Make up lab opportunity

Lab Meetings 15 - 18

 Thin-Layer Chromatography of an Unknown

Lab Meetings 19 – 20

Benzoin Condensation

Lab Meetings 21 – 22

Benzil

Weeks (Lab Meeting 23)

Make up lab opportunity

Weeks (Lab meetings 24 – 27)

Synthesis of Hexaphenylbenzene

Weeks (Lab meeting 28)

Luminol

Week (Lab Meeting 29)

· Check out, review for final

### **Proposed** CHE 231 Schedule

Lab Meetings 1 - 3

- Orientation and safety
- Recrystallization and melting points

Lab Meetings 4 - 6

 Distillation and Gas Chromatography.

Lab Meetings 7 - 9

 Solvent Extraction and Thin-Layer Chromatography

Lab Meetings 10 - 11

• Column Chromatography: Separation of Acetyl Ferrocene

Lab Meetings 12 - 14

 Monitoring a Chemical Reaction: Borohydride Reduction/ IR Spectroscopy

Lab Meeting 15

Make up lab opportunity

### Current CHE 233 Schedule

# Lab Meeting 1

 Orientation, Lab Safety, and Checkin

### Lab Meeting 2

- Lecture on the Approach to Identification of Compounds, Boiling Point Determination
- Lab work on Unknown 1

# Lab Meeting 3

- Lecture on Solubility, Infrared Spectroscopy
- Lab work on Unknown 1

# Lab Meeting 4

- More on Solubility, Infrared Spectroscopy
- Lab work on Unknown 1

# Lab Meeting 5

- Lecture on Classification Tests and Derivatives
- Lab work on Unknown 1

### Lab Meeting 6

- More on Classification Tests and Derivatives
- Lab work on Unknown 2

#### Lab Meeting 7

- Lecture on GC/MS
- Lab work on Unknown 2

#### Lab Meeting 8

- More on CG/MS, Classification Tests and Derivatives
- Lab work on Unknown 2

### Lab Meeting 9

Lab work on Unknown 2

# Lab Meeting 10

Lab work on Unknown 3

# Lab Meeting 11

• Lab work on Unknown 3

# Lab Meeting 12

- Exam 1
- Lab work on Unknown 3

# Lab Meeting 13

- Lecture on Separations, NMR
- Lab work on Unknown 3

### Lab Meeting 14 - 19

• Lab work on Mixture Unknown 1

# Lab Meeting 20

- Exam 2
- Lab work on Mixture Unknown 2

# Lab Meeting 21 - 23

Lab work on Mixture Unknown 2

# Lab Meeting 24 – 27

 Completion of Mixture Unknowns, Makeup lab opportunities`

# Lab Meeting 28

Check-out

# **Proposed** CHE 233 Schedule

# Lab meeting 1

• Orientation, Lab Safety, and Checkin

# Lab Meeting 2 – 4

• Organic Electronic Materials: Preparation of TIPS-Pentacene

# Lab Meeting 5 – 7

• Preparation of a Dipeptide from Protected Amino Acids.

# Lab Meeting 8 - 10

 Biodiesel – Transesterification of vegetable oils and NMR determination of fatty acid composition.

# Lab Meeting 11-13

Macrocapsules

# Lab Meeting 14 – 15

• Opportunity for Makeup Labs, checkout.

# The **Proposed Organic Lab Sequence**

### **CHE 231**

Lab Meetings 1 - 3

- Orientation and safety
- Recrystallization and melting points

Lab Meetings 4 – 6

 Distillation and Gas Chromatography.

Lab Meetings 7 – 9

 Solvent Extraction and Thin-Layer Chromatography

Lab Meetings 10 - 11

• Column Chromatography: Separation of Acetyl Ferrocene

Lab Meetings 12 - 14

• Chemical Reactions: Borohydride Reduction/ IR Spectroscopy

Lab Meeting 15

Makeup lab opportunity

### **CHE 233**

Lab meeting 1

 Orientation, Lab Safety, and Checkin

Lab Meeting 2 – 4

• Organic Electronic Materials: Preparation of TIPS-Pentacene

Lab Meeting 5 – 7

 Preparation of a Dipeptide from Protected Amino Acids.

Lab Meeting 8 - 10

 Biodiesel – Transesterification of vegetable oils and NMR determination of fatty acid composition.

Lab Meeting 11-13

Macrocapsules

Lab Meeting 14 – 15

• Opportunity for Makeup Labs, checkout.

# CHE 231-001 ORGANIC LABORATORY I Fall 2012

# **SYLLABUS**

### **PREREQUISITES**

General Chemistry labs; prereq or concur: CHE 230 or CHE 236

# **COURSE SECTIONS, MEETING TIMES, & ROOMS**

This section of CHE 231 meets on Mondays from 11:00 AM-1:50 PM. On days when a pre-lab lecture or a quiz is scheduled, you should come to CP 320 at the beginning of the meeting time for your section. On these days, lab work will start (in CP 336 or 340 or 312) immediately following the lecture. The days when there is no lecture, you should go directly to the lab (CP 336 or 340 or 312) at the beginning of the meeting time for your section. Regular attendance and being present on time for lectures, and lab work is mandatory.

#### COURSE GOAL

The goal of CHE 231 organic laboratory I, is to expose students to basic practical aspects of organic chemistry and to provide hands-on training in common techniques used by organic chemists.

### **INSTRUCTORS**

Each section will have its own teaching assistants. The faculty supervisor for this course is Dr. M. D. Watson. His office is CP 318 (phone: 257-4529; e-mail: mdwats2@email.uky.edu). He can be reached by scheduling an appointment. The laboratory coordinator for this course is Dr. M. A. Patwardhan. Her office is CP 327 (phone: 257-3659; e-mail: mapatw00@uky.edu). Her office hours are Monday, Wednesday: 10:00-11:00 AM, or you may schedule an appointment.

# **TEXTBOOK AND RESOURCES**

The required textbook is *Microscale Organic Laboratory*, 5th Edition, by Mayo, Pike and Forbes. You must also purchase the required (*Hayden-McNeil*) student laboratory notebook. You are also required to use the Blackboard site for this course. During the semester, the course material and information required for this course will be made available on the Blackboard site for this course. You are responsible for reviewing and understanding the contents therein. You are also expected to review and understand relevant topics from a textbook (such as *Organic Chemistry*, by J. G. Smith, third Edition or any other textbook -if assigned) for lecture courses CHE 230 and CHE 232.

Note: For questions related to Blackboard computer support (including password reset), contact 111 McVey Hall, (Open 7 am-6 pm weekdays); Phone: 859-257-1300; email: helpdesk@uky.edu.

#### **GRADING**

Your final numerical grade will be calculated based on the following:

Pre-lab Assignments:	Pre-lab Questions (for all 5 experiments)	20%
Post-lab Assignments:		
C	Laboratory reports (for 3 specified experiments)	36%
	Work-sheets (for 2 specified experiments)	24%
Exam:	Final exam (1)	20%

Letter grades will be assigned using the following scale:

A	90-100%
В	80-89%
C	70-79%
D	60-69%
Е	< 59%

### SAFETY AND RESPONSIBILITY

Failure to observe safety rules (see Laboratory Safety handout) and /or failure to behave in a safe and responsible manner may result in a failing grade and permanent dismissal from the course.

# **CHEATING AND PLAGIARISM**

The Department of Chemistry considers cheating a very serious offense. Attempts to claim another person's work as your own, in any form or under any guise, is forbidden. All the work that you do for this course must be your own only. This includes: post-lab write-ups, data, compounds that you synthesize, spectra, results, laboratory notebooks, quizzes, exams, etc. While writing lab reports etc. **do not** copy and paste or scan information such as reactions, mechanism, procedure, etc. <u>from the course Blackboard site or any other source</u>. When including reactions and/or mechanisms in an assignment, make sure that <u>you yourself have written it</u>, either electronically or by hand. Any material that is paraphrased or quoted from another source must be properly referenced.

# Post-lab assignments will be electronically scanned against those from the current and previous semesters.

For information on plagiarism, refer to: <a href="http://www.uky.edu/Ombud/Plagiarism.pdf">http://www.uky.edu/Ombud/Plagiarism.pdf</a> and the manual *Student Rights and Responsibilities*.

Falsifying laboratory data or 'dry labbing', making up data is cheating.

Removing laboratory chemicals, reagents or any other items from the laboratory is forbidden. Such behavior may result in a failing grade and permanent dismissal from the course.

### **Penalties for Academic Offenses in Organic Chemistry Laboratories:**

For academic offenses, discretion is given to the instructor in assigning a penalty. For a first offense, the **minimum** penalty is a zero on the assignment and a reduction in the course grade by **at least** one letter grade. For more serious offenses, even if it is a first offense, the instructor can assign an E or recommend a penalty of XE for the course. A second offense will receive a harsher penalty as

outlined in Senate Rule 6.4. The penalty for a second or subsequent offense will depend on the penalty of the previous offense(s), regardless of when or where the prior offense occurred. Penalties can be given to both the student committing the offense and any other student who is an accessory to the offense (i.e. giving them the lab report, data, or product) regardless of intent. More information about plagiarism and examples of plagiarism is available on Blackboard. You are responsible for reviewing and understanding the contents therein. Questions regarding plagiarism should be directed to the Lab Supervisor.

# ATTENDANCE POLICY, LABORATORY ASSIGNMENTS, NOTEBOOK, DUE DATES

For this laboratory course, you must be present in the lab and classroom on time. Attendance for lectures, lab is required.

If you miss a class meeting (lecture or lab or both) without an excused absence, 0.5 percentage point will be deducted from the <u>final</u> grade for each unexcused absence. Students arriving after the first 15 minutes once class and/or lab starts, will be marked absent. On the days when a lecture is scheduled, lab work will start immediately following the lecture. On all other days lab work will start at the beginning of the meeting time for your section. Students arriving after 15 minutes once the class and/or lab begins, will be marked absent and will receive the penalty stated above.

Students leaving lab more that 15 minutes early unless they have finished the scheduled experiment will also be marked absent and will receive the penalty stated above. If you finish the scheduled experiment early, and therefore do not need to stay in the lab until the end, you **must** inform your TA before leaving the lab in order to not be marked absent.

If you finish the scheduled experiment early (say 2 days instead of 3), and therefore do not need to come to the lab on the third day, you **must** inform your TA by sending him/her an email <u>before</u> that lab in order to not be penalized for your absence. However, please note that if there is a lecture scheduled on that day, your attendance is required.

**Information about experiments and assignments:** There will be a total of 5 experiments that students will perform in this course. <u>Only paper copies of all assignments will be graded.</u> For every experiment, there are assignments:

Pre-lab Assignments: Answers to pre-lab

Post-lab Assignments: Laboratory report or Work-sheets.

### **Pre-lab questions:**

For all experiments, answers to pre-lab questions must be turned in to your teaching assistant *before* the start of every new experiment. Completed assignments must be turned as soon as you go to the lab but no later than the first 15 minutes of the lab meeting time for your section on the days when they are due. Pre-lab questions turned in after that time will be considered late and <u>will not be graded</u>. A '0' will be recorded as the grade for the pre-lab assignment for that experiment. Students who turn in incomplete assignment will not be able to receive full credit.

**During lab:** During each laboratory period, all the data and comments must be entered in your notebook, and your duplicate (copy) sheets must be turned in before you leave. There will be a penalty for failure to do so. All your other data such as IR spectra, GC printouts etc. must have your name and date when you recorded it. Before you leave, you must have your TA sign and date all the data. There will be a penalty for failure to do so. For the details about the departmental laboratory notebook policy, refer to:

# http://www.chem.uky.edu/courses/common/notebook.html

### Post-lab (Work-sheets or Laboratory reports) assignments:

For the following two of the five experiments, work-sheets (available on Blackboard) are to be submitted: Recrystallization, Column chromatography

Laboratory reports are to be written and submitted for the remaining 3 experiments.

Work-sheets or Laboratory Reports are to be submitted *after* the experiment is completed; paper copies of the complete work-sheets or laboratory reports must be turned in by the first 15 minutes of the meeting time for your section on the days when they are due. Work-sheets or lab reports turned in after that time will be considered late. Students who turn in incomplete work-sheets or lab reports will not be able to receive full credit. If any part of the assignment is turned in late, the entire assignment will be considered late.

Information about the exact due dates and the details of how to write laboratory reports is available on the Blackboard site.

Failure to turn in correct post-lab assignments by the first 15 minutes of the meeting time for your section on the days when they are due will result in a minimum penalty of one point. An additional point each will be taken off for every working day that post-labs are late.

The absolute last day to turn in any assignment (even with penalty) is by the first 15 minutes of the meeting time for your section on the check-out day. Any assignments turned in after that will not be graded and will receive a zero.

# **GRADING, MAKE-UP POLICIES, SPECIAL NEEDS:**

Teaching assistants will grade all your work, including all assignments, and final exam. If you have any questions regarding grading of any assignment, you must contact your teaching assistant or Dr. Patwardhan within one week of the date on which the assignment was returned. All re-grading requests must have a note explaining the reason for requesting re-grading. We reserve the right to re-grade the whole assignment. Any assignments returned for re-grading after more than one week from the day the assignment was returned will not be considered for re-grading. A student who has changed an answer and presented it for re-grading has cheated. Selected assignments and exams will be photocopied in order to minimize the temptation for this.

If you must miss any component of a lab, or lecture, or if you must be late, with an excused absence, notify your teaching assistant and Dr. Patwardhan in advance. If this is impossible, as soon after the absence as you can, but no later than one week after the absence. For <u>every</u> absence, submit a "Make-Up Request Form" available on the Blackboard site for this course. Appropriate documents for verifying the excused absence must be attached to the "Make-Up Request Form". For receiving <u>any</u> accommodation for your excused absence you must submit the "Make-Up Request Form" and appropriate documents for verifying the excused absence no later than one week after the absence.

You may make up laboratory work missed for a documented excused absence (that conforms to the University Senate Rules) during make-up lab days. Please notify your teaching assistant in writing at least one week in advance of the make-up lab, of the experiment(s) you need to make up. If an

experiment is missed without an excused absence, a '0' will be recorded as the grade for the post-lab assignment for that experiment i.e. the laboratory report or the work-sheet.

#### **Notes:**

The manual Student Rights and Responsibility describes what excused absences are.

- 1. Please note conflict with a work schedule is not a valid University excuse for missing an exam/quiz.
- 2. Computer malfunction, printer problem, virus, etc. will not be accepted as an excuse for turning in assignments late. Save your work often, keep a back-up and print your work early.
- 3. University Health Services will provide an appointment validation form. The validation form will be printed on light blue paper and will have an embossed UHS stamp. This form will have patient's name, the date and time of appointment and the signature of the providing clinician. Attach a copy of the form as a document with the "Make-Up Work Request Form".
- 4. If a student has excused absences in excess of one fifth of class contact hours, a student will be required to petition for a "W".
- 5. If you have a documented disability that requires academic accommodation, please see Dr. Patwardhan as soon as possible during her scheduled office hours. In order to receive accommodations in this course, you must provide a Letter of Accommodation from the Disability Resource Center (Alumni Gym, Room 2, 257-2754, jkarnes@uky.edu). Such letters should be submitted by the last day to add a class or within one week of receiving a letter.
- 6. Policies stated above will be strictly enforced.

#### BLACKBOARD

During the semester, information required for this course will be made available on the Blackboard site for this course. Therefore, you should check the Blackboard site for this course every day. You will be responsible for all the information available on the Blackboard site for this course.

Information about Blackboard at UK can be found at http://www.uky.edu/Blackboard/

Note: For questions related to Blackboard computer support (including password reset), contact 111 McVey Hall, (Open 7 am-6 pm weekdays); Phone: 859-257-1300; email: helpdesk@uky.edu.

DATES	Lectures in CP 320; Quiz in	READING*		
	CP 320/Other Rooms TBA			
27-Aug	Introduction,	Syllabus, Safety Handout		
	Laboratory safety	Sylladas, Salety Halladat		
3-Sep	Academic Holiday			
	1. Recrystallization and	pp. 1-27, pp. 45-54,		
10-Sep	melting points	Handout (on Bb), pp. 85-		
		91, pp. 539-561		
17-Sep	2. Distillation and Gas	pp. 55-67, 132-135		
17 Бер	Chromatography[3B]	pp. 33 07, 132 133		
24-Sep				
8-Oct				
	0.01	pp. 67-84, pp. 141-151;		
15-Oct	3. Solvent extraction and Thin	TLC Handout (on Bb), pp.		
	Layer Chromatography [4C]	97-99		
22-Oct				
	4. Column chromatography:	pp. 92-95; 362-363; 366-		
29-Oct	Separation of acetyl ferrocene	367		
	[28]			
5-Nov	[5 D 1 4: 6			
12-Nov	5. Reduction of	pp. 151-158		
	cyclohexanone [5A]			
19-Nov				
26-Nov				
	Review for the Final Exam			
2 D	Attendance is required. No			
3-Dec	lab reports accepted after this			
	date.			
TBD	Final Exam: Time: TBD	Comprehensive		

# ▲ Please note the final will be 1 hour, not 2 hours.

<sup>\*</sup>Readings are handouts posted on Blackboard and material from your tex

<sup>\*\*</sup> For students who may have missed a lab due to an excused absence

EXPERIMENTS in CP 336/340/312
Orientation; 1. Recording M. P.
No class
1. Recrystallization
1. Recrystallization
2. Distillation
2. Distillation
3. Solvent extraction
3. Solvent extraction
4. Column chromatography
4. Column chromatography
4. Reduction
4. Reduction
Make-up**
Clean-up

atbook (Microscale Organic Laboratory, 5th