Our dermatology course will continue in the new direction first launched in 2010 with the expectation that more interactive learning will lead to extensive practice with and much greater retention of 1) core concepts and vocabulary, 2) problem-clarifying and problem-solving principles, and 3) efficient approaches to diagnosis and proper treatment.

There will be no traditional course pack for this course

This introduction is your detailed map to the course. You must read it carefully and successfully complete the quiz on the content to gain access to study materials.
This Introduction is your in-depth guide to the course. Knowing its contents well will help you gain mastery of the subject. You must answer the five following questions about this Introduction in order to gain access to the online course study materials when they become available on May 11, 2015

1. Of course you are responsible for your own choices during the I-clicker quizzes at the beginning and ending of each class session. As you think about what the correct answer might be, you

   A. May call out your answer to help other struggling classmates
   B. May confer with students in other teams who are sitting nearby
   C. May use your computer to look up answers
   D. May quietly discuss options with your own teammates
   E. Must answer the questions individually without seeking any help from others

2. A team of students, properly prepared for class, is called up front to answer questions during one of the sessions in this course. They know they must use their own words. As they huddle together to pick which team member will answer which question, they may refer to

   A. Carefully prepared small note cards
   B. Lap top computer files
   C. Only the memories and problem-solving capacities already available in their very good minds
   D. Sheets of paper with notes on them
   E. Smart phones

3. To successfully complete 2015 OST 576, you must answer sets of questions by reviewing relevant online resources specially prepared by our faculty, required websites (aad.org and pediatrics.wisc.edu/education/derm/tutorials.html), and by visiting a few additional carefully selected websites (emedicine.medscape.com/dermatology and dermnet.org.nzsitemap.html). Our primary goal in directing you to the additional websites is to provide

   A. A reliable source for alternative therapies
   B. Additional detailed text on pathophysiology which you must memorize
   C. An authoritative source for the details of evidence-based treatment
   D. Sources which are not copyright-protected
   E. Useful additional photographs of conditions covered in the course
4. A patient presents with a skin rash. While all levels of reasoning as defined by Bloom are used in the process, the reasoning level which BEST assures that the final diagnosis of the rash in this patient is accurate is

A. Analyzing  
B. Applying  
C. Comprehending  
D. Judging  
E. Synthesizing

5. Having completed this course successfully, you see a small raised brown mass on the upper arm of your grandfather. He says it has been there unchanged for years. The BEST way for you to decide between offering reassurance and getting him to a dermatologist is by

A. Considering all dark lesions malignant until proven otherwise  
B. Generating a small list of possible explanations and examining the lesion for distinguishing features  
C. Ignoring the history and focusing only on the lesion itself  
D. Relying on your memory of the few dark lesions you have seen  
E. Relying on the probability that most dark lesions are not malignant

N.B. These questions and the answers to them will be posted separately on D2L. The questions and the answers illustrate both expectations and important principles worth knowing. You both must answer the questions and review the correct answers to access your study materials.
The new curriculum aims high as it should. The old teaching model at COM was badly broken - high on cramming too much information into students, expecting little more than regurgitation on exams, encouraging rapid forgetting. The students were not being treated as graduate students capable of critical thinking, capable of developing the discerning habits of mind essential to effective lifelong learning.

Speaking of those whose learning lasts, retired teacher Alice Venerable Middleton states in *Blue Highways* “… there’s only one place they can get an education – in the school of thought. Learning rules is useful but it isn’t education. Education is thinking. And thinking is looking for yourself and seeing what’s there, not what you were told was there. Then you put what you see together.”

That’s what I intend this course to be about.
We are very fortunate indeed to have Dr. Kennedy, Ms. Nantais, and Dr. Stephenson join us to offer special contributions on Histology, Immunology, and Physiology of the Skin. Their lectures and labs are listed in the schedule and are considered integral to the course. You will be tested on their material in the final examination.

Their lectures and labs will be organized and treated differently from the material in my portion of the course.

As you will see below, in my portion of the course there will be no traditional lectures. Because of copyright concerns and the way the course is planned and delivered, there will be no live-streaming or recording of our discussions by Media Services for later review. And no videorecording, audiorecording, or photographs are permitted in the classroom. Think of the classroom in this course as a place to demonstrate in front of your classmates what you have learned in your own words. Think of it not as a place for yet another lecture, but as an interactive laboratory in which you sharpen your ability to see and describe, hone critical thinking skills and learn to efficiently solve real world problems.
Interaction will be emphasized and all students will be expected to participate as fully prepared student teams who have done the necessary work ahead of time. We need others to help us do our job best. Functioning in teams is the model for medicine in the future and this course is designed to give you practice with that model. True teamwork demands mutual effort. Each team member must contribute and has much to contribute to the co-learning of the group. I expect that students working in their self-selected groups of three will need to invest about two-three hours outside class for each hour in it to do well.

**Conventional lectures will not occur.** Every class session will consist of opening and closing quizzes, five or six brief student team presentations, and corresponding faculty responses. In essence, each will be a learning laboratory. 60% of the grade will come from class participation.
We are intentionally modeling the roles of the primary care physician and the specialist. Most skin conditions can be diagnosed and managed by the primary care pediatrician, internist, gynecologist, and family medicine physician. It is efficient, effective and personally gratifying to do so. We will demonstrate how our dermatologist colleagues can help us teach ourselves to do that and make appropriate referrals to them when necessary.

Dermatology has always been a special part of our curriculum. An opportunity like this has been available in few medical schools in the country. This semester you will be part of an important continuing attempt to reshape and substantially improve instruction at COM, an ambitious undertaking on behalf of more effective teaching and learning. With appropriate investment you will learn a great deal in the process and reap the dividends in your clerkship years and during the remainder of your professional life. It will help you on your COMLEX exam.

I welcome your assistance in making this endeavor a very nice gift to yourselves and to the students who follow you.
**Individual Course Learning Goals for 2015**

Retain essential concepts, vocabulary, principles of decision-making, effective and efficient diagnostic processes, and the essence of evidence-based treatment ready for use in the clinical years.

Stress rigorous pre-class preparation by student teams in order to first find and discuss answers to the study questions provided them and then rehearse the oral presentation of those answers before their classmates.

Practice in class. Learn how to put things into your own words. Change lectures into laboratories.

Become comfortable with efficient diagnostic algorithms (reliable clinical pathways) which promptly and accurately sort out patients with skin problems who are seriously ill or at risk to complications from chronic illness from those not so sick.

Be able to recognize emergencies presenting in the skin.

Be able to recognize skin signs of systemic illness.

Be able to recognize skin findings which suggest underlying anatomical abnormalities.

Expand the capacity to develop and efficiently sort out the differential diagnosis of common and important conditions confined to the skin.

Be able to outline the principles of necessary, effective, and safe treatment for the conditions discussed in the course.

Learn when consultation for skin findings is truly required to optimize patient care.
To accomplish these aims, we will proceed as follows:

You must work in threesomes (your choice of teammates) throughout the class, including the final examination. It is important that threesome selection be accomplished early because your learning folders **(concepts and conditions you must know, questions you must answer, and essential resources)** will be ready on the OST 576 D2L site on Monday, May 11, 2015 and you will need to get started to be ready for the actual first day of my class on Friday, May 22.

It is important that you identify yourselves as threesomes to Cheryl Luick (luick@msu.edu) **no later than Friday, May 8, 2015. Failure to do so will result in a loss of 10 points from your course grade.** If Cheryl is not notified by 5 p.m. Wednesday, May 13, 2015 you will not be permitted to work in threesomes in advance, will still be called upon in class to present as part of an unfamiliar threesome, and will have 40 points deducted (slightly more than 13%) **from your final grade.** Previous classes have avoided any penalty. Team selection has always been complete well before the first deadline.

No changes in threesomes will be permitted during the course. No groups of four will be allowed. And groups of two will be permitted only at the discretion of the instructor to assure no one has to work alone. The instructor will pick the necessary few groups of two in that case.
Self-selection of three person teams beginning Friday April 17, 2015 and completing selection by no later than Friday May 8, 2015

May 11 – May 21: Team review of and practice with instructional objectives, concepts, questions, and resources folders utilizing detailed online example of classroom expectations for students (See further below in this Introduction and Course Map) before the first day when students actually come to my class which is Friday May 22, 2015 (the D2L site will open to students on Monday, May 11, 2015). We will hit the ground running on May 22 with the first pre-quiz at 10:00 on Anatomy of the Skin, so be fully prepared.

Histology Lecture, Labs, and Help Sessions are not included in this schedule, but are in the Course Syllabus

Discussion Schedule (Dates are fixed, but order of topics could change)

Friday, May 22, 2015:
Anatomy of the skin: (Joe Vorro and Steve Williams, 10-10:50)
Dermatological problem-solving I: Distinctive skin lesions, colors, and patterns (Steve Williams, 11-11:50)

Tuesday, May 26, 2015:
Dermatological problem-solving II: The use of symmetry and linearity in dermatological diagnosis: (Steve Williams, 10-10:50) Flexural rashes, sun-exposed sites, acral rashes, truncal rashes, clothing covered areas, acneiform rashes, Koebner phenomenon, lichen striatus, ...
Pharmacology of the skin: (John Thornburg, 11-11:50)
Friday, May 29, 2015:
Papulosquamous disorders: (Greg Piro, 10-10:50)
Vesicobullous disorders: (Greg Piro, 11-11:50)

Tuesday, June 2, 2015:
Skin emergencies I: Toxic epidermal necrolysis, Stevens-Johnson syndrome, meningococcemia, RSF, toxic shock syndrome (Mary Hughes, 10-10:50)
Skin emergencies II: Thermal injury (Mary Hughes 11-11:50)

Friday, June 5, 2015:
Newborn skin disorders: Pigmented nevi, vascular birthmarks, ephemeral lesions (Steve Williams, 10-10:50)
Acne and rosacea: (Steve Williams, 11-11:50)

Tuesday, June 9, 2015:
Skin tumors: (Greg Piro, 10-10:50)
Pediatric exanthems: Roseola, erythema infectiosum, hand, foot, mouth, and buttock disease, scarlet fever (strep and staph) Steve Williams, 11-11:50)

Friday, June 12, 2015:
Dermatitic eruptions and vascular reactions: Atopic dermatitis, nummular eczema, contact irritant and allergic dermatitis, diaper dermatitis, urticaria, angioedema, pernio, Raynaud's disease, livedo reticularis (Steve Williams, 10-10:50)
Infections and infestations: Impetigo, folliculitis, scabies, lice, arthropod bites, fungal infections, genital ulcers and papules,... (Steve Williams, 11-11:50)
Tuesday, June 16, 2015:
The skin and systemic disease I: A few important endocrine, rheumatologic, and other disorders (Greg Piro, 10-10:50)
The skin and systemic disease II: Two common genodermatoses; additional important oncologic, rheumatologic, and other disorders (Greg Piro, 11-11:50)

Friday, June 19, 2015:
Alopecia and nail disease: (Steve Williams, 10-10:50)
Disorders of hyperpigmentation and hypopigmentation: (Steve Williams, 11-11:50)

Tuesday, June 23, 2015:
Special skin injuries: Solar damage and reactions, lichen simplex chronicus, cutting, child abuse and its mimics (Steve Williams, 10-10:50)
Skin lesions which potentially flag underlying anatomical abnormalities: (Steve Williams, 11-11:50)

Friday, June 26, 2015:
Final Examination Review: (Steve Williams, 11-11:50)

Tuesday, June 29, 2015:
Final Examination: 10-11:50
A Note on Appropriate Use of Your Resources Folder

As your team works to prepare for class by answering the questions in your question folder (your map for study) you will naturally open the companion resources folder. In that folder you will find PowerPoint slide sets (these have been revised in important ways for 2015 – more information, clearer photographs, more carefully focused targeting of additional required readings) containing many of the answers to the questions posed in your question folders. You will often have to work some with the material in those Powerpoints to figure out the answers though. You will need to compare photographs of different conditions to truly see the similarities and distinguishing differences between/among them.

The more examples you see of different conditions the better. Thus the material in the PowerPoint slide sets will often need to be supplemented by going to the selected derm websites your faculty has vetted such as aad.org (Medical Student Core Curriculum), emedicine.com, and dermnetnz.org to find additional photographs illustrating the conditions as well as carefully vetted text. We are emphasizing seeing and describing rather than reading in this course, but you will be held accountable for understanding, phrasing in your own words, and using any carefully targeted text to which you may be directed.

In real life the primary care physician looks information up every day in the clinic; we want to give you experience with this as part of the course. Most of all we really want you to see, think, and express yourself clearly with confidence. The more examples you see of selected conditions, the more variations on a theme, and the more you have discussed your findings with your teammates, the better you will be able to identify those conditions in real patients of your own and shine in the classroom in front of your colleagues.
Excellent Web Sites

http://www.aad.org

Click on Education and Quality Care and then scroll down to Medical Student Core Curriculum. **This is a required resource.** You will be expected to know the topics in these modules which are addressed in your Questions folder (e.g., Henoch-Schoenlein purpura), but you will **not** be tested on forms of vasculitis not mentioned (e.g., periarteritis nodosa)

http://www.pediatrics.wisc.edu/education/derm/tutorials.html

Superb presentation of primary lesions, secondary lesions, and arrangement. Essential foundation of the course

http://emedicine.medscape.com/dermatology

Click on any of listed conditions covered in the course. Review clinical presentations in detail, but seek to grasp merely an overview of basic science, pathophysiology, and the general principles of therapy. Wonderful discussions
Another Wonderful Web Site for Images


1. Look at A-Z index of conditions and treatments for pictures and descriptions of most of the conditions we will cover in this course. Topics easy to locate. And the more examples you see of different conditions, the better you will become at recognizing them.

2. For voluntary practice if you wish, go to Contents on the scroll bar, under General Information click on Continuing Medical Education and then click on: Dermatology Course for Auckland Medical Students to find a very nice review of concepts and vocabulary, conditions, and self-tests designed for your counterparts in the southern hemisphere.

3. You will be notified in your question sets and resource folders about some carefully selected sections where the text is particularly helpful and highly recommended. In general you will not be held accountable for text related to treatment in this site since there may be some differences in practice cited from what is currently recommended in this country and we want to maximize clarity in the course.
Each group of three will not only study together, but also be prepared to answer in front of classmates three questions selected from the larger pool of questions in the question folder for the session. And also be prepared to answer follow-up questions from your faculty discussants. You will have the pool of questions (questions you must answer study guide) available to you at least one week before each session. Your presentations will constitute an important part of your final grade.

Unless you have presented earlier, you will not know coming into class if the three of you will be called upon in that particular session. That is why pre-preparation of answers is essential for all questions found in the folder.

We will make every effort to assure this will not be a class where the few students in the room sit passively and read scribe notes later. Your attention to what is discussed in class and your respect for your fellow student presenters will be essential. Faculty discussants will also be addressing questions from time to time to individual members of the larger audience. And the quiz at the end of each session will draw in part from fresh material covered in class discussion as well as that studied before coming to class.

High stakes. No one has to come to class. I will treat you as adults always. But no make-up quizzes or presentations. And we have had near-perfect attendance for each session every year for the entire course.
Teams will be called to the front of the class and as you walk forward you will see on the screen the three questions the three of you must answer on a slide presented to all students at the three sites. You will have a total of five minutes to answer your questions.

In past years, I permitted teams to bring small notecards for assistance when speaking to their classmates and professors in front of the class. However, this has been getting in the way of students stating things in their own words, a crutch which actually impairs actively and thoughtfully walking through topics with your professors. Reading from the cards is simply not useful to the learning process. Hence, this year no notecards or other reference material of any kind may accompany you when you and your team are called up to answer questions in front of the class.

During the one minute available when up in front for reviewing your collective thoughts about the questions you are being asked to answer, you and your teammates will also select which of you will answer which one of the three questions in presented to the team as a whole (everyone will have a job to do). And then you will have four minutes as a team to answer the three questions. So practice beforehand is clearly essential, especially now that notecards have been eliminated.

Physicians are public speakers every day. This class will give you some useful practice. Many of you may be a bit nervous. Come prepared and use your eyes and fine minds, your own words, not those of others, to answer your questions. You will be treated with understanding and kindness in front of the class. We know many of you may just be getting used to public speaking. Focus on presenting your own thoughts in your own way. Don’t worry about getting your speech perfect, just about getting your ideas across. You may surprise yourself by developing and offering ways of explaining things useful not only to your classmates but also to your professors. And you will certainly consolidate your own understanding.
Session Template

**Minute 0-1:** Initial iclicker quiz (2 points)

**Minutes 2-48:** Team presentations and faculty discussion (worth up to 40 points per team)

Team 1: Five minutes for preparing and delivering answers - **one minute** for looking at projected question set (see next slide), reviewing thoughts, deciding on which team member will tackle which question and then **four minutes** for answering questions

   Faculty discussion of question 1: Three minutes

Team 2: Five minutes ….

   Faculty discussion of question 2: Three minutes

Travel time (to and front of class and back): One minute

Team 3

……. and so it goes

**Minutes 49-50:** Final iclicker quiz (5 points)
14. Which characteristic lesion in acne is absent from rosacea?

15. How would you treat rosacea most successfully? How does the treatment of acne differ from that for rosacea?

16. This twelve-year-old boy has bumps on his face. Is Benzoyl peroxide an appropriate choice of treatment? Defend your answer.
In addition to the class presentations, in each session there will be a graded one minute iclicker prequiz (for this course you must always have your clicker with you - no exceptions) beginning promptly at the beginning of each class (Clearly, you must be on time and settled in your seats before the hour - latecomers will not be permitted to take the quiz). This initial quiz is worth two points. And at the end of each session there will be another harder two minute graded iclicker post-quiz worth five points in which you will apply what you have learned to date, including what was just covered in class.

You may work quietly within your original threesomes on those quizzes, but no discussion among threesomes will be permitted. Just as on the final examination. Any such action of conferring across threesomes will be considered unprofessional; the consequences for violation of this rule will be significant (see Professionalism and Academic Honesty in Student Handbook and Resource Guide).
A note on changes in pre-quizzes, post-quizzes, presentations, and final examination for 2015:

A few students mentioned in their evaluations in 2014 that I should completely change the pre-quiz and post-quiz questions and answers from year to year. I have always sought to improve pictures, questions, and answers, but have not generally rewritten everything. I wanted to keep assessment constant and focus on helping students improve their understanding and performance. This is a course about seeing and thinking. I listened as I always do and have reviewed all quizzes and redone almost every pre-quiz and post-quiz for 2015. About same degree of difficulty, but new.

One student asserted that teams at least at one site were not doing their own work, that scribe notes were being used to help student teams answer their presentation questions and most of the teams there were simply reading from the notecards the scribes had prepared for them. Perhaps this simply meant that answers were prepared to questions asked in the question folders and handed out in some fashion. There are no shortcuts to learning and becoming a fine physician. Because of this, I have reviewed and altered the questions in the question folders used for study and rewritten many of the actual questions which will be asked during the team presentations in class. And, as mentioned earlier in this introduction, in 2015 we will completely eliminate the use of notecards or other presentation aids. This is simply done to make the learning experience more valuable for you.

The performance on the final the past two years has fallen far short of the performance in class. The discussion above may supply part of the answer. However, I will prepare for one of our classes and also post online after the final exam review five sample questions (timed, one minute to answer questions) like those (of course not the same as) on the final. This should help your preparation. This is important because grading expectations will not change and in class scores may fall a bit because of new questions. Before 2012, in class performance more closely matched performance on the final examination; to wit, not everyone aced all the quizzes but most did quite a bit better on the final (difficulty was comparable) than the last two classes have. Ideally, classwork and final should offer the same level of learning opportunity and challenge, and produce comparable outcomes. And this year passing the course will require a grade of at least 70% on the final.

Finally, I will for the first time schedule a one hour final exam review conducted simultaneously for all sites after the course has ended. This will be announced later in the course.

I remain deeply committed to your learning. It is a privilege to be a co-learner and a teacher. This has always been a course designed for and continuously reshaped by future physicians. In my quest for ever greater usefulness, I read and think about every evaluation carefully. And this year's course will be an even better one because I do.
There will be 302 possible points available in the course

The passing score for the course will be 75% (227 points) and that score must include a grade of at least 70% on the Final Examination; anything less than that will earn an N.

Failure to score 227 will result in an N grade and remediation. A score of 285 or greater will earn a letter of commendation from the course director.

60% of your final grade will come from class participation:

The quizzes and class presentations combined will offer 182 possible points.

The potential value of the 20 quizzes = 140 points (142 with Histology quizzes included)

The maximum value of the class presentation by the student team = 40 points (partial scores will be awarded if answers are incorrect)

Hence, class participation will account for 182 points (including Histology Lab)
Scoring of team presentations:

Each threesome will be asked three questions by the faculty member, one question directed to each member of the team. The team may choose who answers each question.

There will be two recall questions worth 10 points each and one application question involving pictures worth 20 points.

If all three questions are answered correctly, each member of the team will get 40 points. Incorrect answers could result in a score for each member of the team ranging from 0-35.

Dermatology is about seeing, touching, thinking clearly. From the beginning of the course, each member of the team should come prepared to answer questions not only in his or her own words but also by identifying a portion of a slide or defending a choice of diagnosis while looking at an unknown.

The complexity of the questions for the threesomes will gradually increase as the course proceeds. Those called on at the beginning will have less familiarity with the process; this in itself will increase the degree of difficulty for them. Those who are called upon later will have the benefit of experience from watching others perform and have a larger body of knowledge to draw upon. But every effort will be made to assure fairness for all teams.
More regarding rationale, process, and scoring of presentations in 2015 OST 576:

1. We want you all to be successful
2. We recognize that public speaking may not come naturally to all of you, but to be successful all physicians (except for pathologists and radiologists) must have the ability to convey their impressions and recommendations clearly to patients and pathologists and radiologists must themselves be able to communicate effectively with their fellow physicians. This course will give you some useful practice
3. Remember that you are among friends. No matter how many years of experience we have we are all students of medicine, all co-learners. And we want every prepared student to succeed
4. Clearly you will want to practice answering questions to each other in your teams before the class. A lot.
5. Each member of the team will be asked a question and have the primary responsibility for answering it. Of course, team members (not the audience) can offer consultation if the presenter gets off on the wrong track or even stuck during the team presentation.
6. The team will have up to five minutes set aside to review ideas, select who will answer which question, and answer the team’s questions
7. For the purposes of this course, an unacceptable answer to a question will be given zero points. An excellent answer will earn ten or twenty points, depending upon the question. Partial credit (in five point increments) may be awarded at the discretion of the faculty discussant.
8. As the course proceeds, you will become increasingly capable of answering more complex questions than you were at the beginning of the course and you will be expected to do so
The final examination will be worth 120 points. You may work in your original threesomes on this examination. No conferring across teams will be permitted just as on the quizzes during the course. Each of you is responsible for your own answer of course, just as you were in quizzes and presentations.
Directions available within the folders under Lessons in D2L will provide you with a map to learning. In them you will find the learning objectives, the concepts you must know, the questions that serve as your guide to the topics, and the resources in which the basic ingredients of answers will be found. Some additional questions will be raised and answered during class discussions. **You will be accountable for all material covered inside and assigned outside of class.** The end of session quizzes will test the additional learning which should have occurred during each session.

Thinking can be ranked from lower to higher as follows:

- recall
- comprehension
- application
- analysis
- judgment (evaluation)
- synthesis

This course will be centered on the use of higher order thinking
Bloom's Levels of Cognitive Complexity (lowest to highest)

- Recalling
- Comprehending
- Applying
- Analyzing
- Judging (Evaluating)
- Synthesizing (Creating)
An example of lower order thinking:

Which skin rash mandates an immediate call to the Centers for Disease Control? Smallpox is the answer. Which level of thinking does this represent?

An example of higher order thinking:

Assume you see photographs of granuloma annulare and tinea corporis – see http://www.dermnet.org.nz/sitemap.html for pictures of granuloma annulare and tinea corporis. What do the lesions share and what distinguishes them?

The best argument that the lesion in the photograph is granuloma annulare and not tinea corporis is the

A. absence of secondary lesions  
B. color of the lesion  
C. location on the body  
D. primary lesion  
E. shape of the lesion

Absence of secondary lesions (scale) is the answer. Granuloma annulare and tinea corporis share everything in the list above except scale. Which level of thinking does this represent?
1. What are the distinguishing features of Verruca vulgaris (common warts)?
2. What are the distinguishing features of Molluscum contagiosum?
   (Brief summary in own words)

Applicable Bloom Level of Cognitive Complexity

Recall
Comprehension

Each worth 10 points

3. Which is which in these slides? Defend your answer
   (You will learn how to do this in the course, promise)

Applicable Bloom Level of Cognitive Complexity

Application

Worth 20 points
The following slide is an example of either the second quiz in each class session or a question on the final examination. Note that the highest levels of cognitive reasoning are required to answer the question satisfactorily.

Applicable Bloom Levels of Cognitive Complexity

- Analysis
- Judgment (Evaluation)
- Synthesis

After inspection, most likely of a slide you have not seen presented by the faculty before, you must:

1) first determine, through analysis and evaluation, the distinguishing findings of the skin lesion shown in the photograph, and then
2) synthesize your observations and name the condition before you can
3) recall and select the correct treatment among the options available
A two-year-old boy has had the following eruption on his trunk and upper limb for the past two months. The MOST APPROPRIATE choice of topical treatment is

A. a calcineurin inhibitor  
B. a fluorinated corticosteroid  
C. an antibacterial antibiotic  
D. an antifungal antibiotic  
E. beetle juice extract
We will begin with quizzes and class presentations by the teams of students on the very first day of class on Friday May 22, 2015. Questions for all sessions will be available one week before the class begins. The topics for our first day will be:

10-11: Anatomy of the skin  
11-12: Dermatological Problem-Solving I

The expectation is that all of you will have studied the materials for that first day and to come to class prepared in each of the two sessions to take the quizzes and be called upon to answer questions as threesomes. So you will need to plan ahead.

The same applies to the following session on Tuesday, May 26 when the topics will be:

10-11: Dermatological Problem-Solving II  
11-12: Pharmacology of the skin

And so on throughout the course
In order to be fully prepared for your quizzes and presentations on Friday, May 22 and Tuesday, May 26 you will need to review the material in the learning objectives, concepts, questions, and resource folders and understand and be able to apply related material on the vetted websites:

On [http://www.pediatrics.wisc.edu/education/derm/tutorials.html](http://www.pediatrics.wisc.edu/education/derm/tutorials.html)

Review and be able to recognize and differentiate primary and secondary lesions as well as arrangements

On [http://www.aad.org](http://www.aad.org) in the Medical Student Core Curriculum:

Basic Science of the Skin
Morphology

While we will discuss and hold you responsible for principles of therapy in the course, we will emphasize diagnosis and differential diagnosis. And the more examples you see the better the diagnostician you will become
I expect each hour of class time will require about two-three hours of preparation by the teams. That assumes that the teams of three will be discussing the material for each session to assure understanding before their potential presentations in class and the two quizzes in each session. Hence, you should plan to budget about four-six hours outside class (of course, some may require or choose to allot more) for study and teamwork in your teams before the first day of class and four-six hours for the second as well. Obviously, it makes sense to mostly complete preparation for Friday. May 22 before Thursday evening May 21. And so on. Each member of the team should learn all of the material and answer all of the questions. All of you will be called upon in class.

Obviously the same drill applies to the remainder of class sessions on the subsequent Tuesdays and Fridays (see Schedule for the titles of lessons and full schedule)
The primary emphasis in this course will be learning how to diagnose and to defend your diagnosis of common and/or important conditions which manifest in the skin.

Although diagnosis is our main focus, for all conditions covered you will be expected to understand and summarize (in a few of your own words – we do not really understand anything until we can put it into our words and explain it to others):

Pathogenesis
Genetic inheritance (not inherited, multifactorial, autosomal dominant, ...)
Clinical presentations (Collect pictures and make a montage for study
Mimics (conditions which at first glance they could reasonably be confused with) (Collect pictures of the condition and its mimics and make a montage for study of similarities and differences)
Diagnostic techniques (clinical presentation, special tests)
Treatment and its Rationale (classes of medications, mechanisms of action, principal side-effects)
Prognosis (recovery, remission, or persistence)
Prevention (what is effective if anything)
Emergency (yes or no)
Signal of underlying anatomical malformation (yes or no)
Manifestation of systemic illness (never/rarely or frequently)

Start developing your own personal folder of condition summaries early in the course. You then can input these summaries into your smart phone for use during clinical rotations
Example of A Completed Summary

**Condition:** Tinea corporis  
**Pathogenesis:** Dermatophyte which lives in the stratum corneum  
**Genetic inheritance:** None  
**Clinical presentations:** In general, annular lesions (erythematous rim of papules and scale with central clearing) anywhere on the body (you should create montages of all conditions for review of different pictures from the websites used in the course)  
**Mimics:** Herald patch of Pityriasis rosea, nummular dermatitis  
**Diagnostic techniques:** Mostly clinical pattern which differentiates it from its mimics (you must know how to use clinical presentations to differentiate all conditions from one another by the end of the course); occasionally, KOH prep  
**Treatment and its Rationale:** Antifungal cream  
**Prognosis:** Good response to treatment; may be reacquired  
**Prevention:** Generally ineffective because fungus is ubiquitous  
**Emergency:** No  
**Signal of underlying anatomical malformation:** No  
**Manifestation of systemic illness:** Almost never

Anything on this list for a condition covered in the course is considered fair game for quizzes, presentations, and the final examination. Start compiling your summaries early.
Classification of Skin Disorders: How You Can Usefully Organize the Conditions You Will Be Expected to Know (lists below may not be complete – may be a few more conditions covered in the course)

**Papulosquamous disorders** (psoriasis, lichen planus, seborrheic dermatitis, secondary syphilis, nummular eczema, drug reactions, pityriasis rosea, tinea corporis)

**Vesicobullous disorders** (Rhus dermatitis, bullous pemphigoid, pemphigus vulgaris, bullous erythema multiforme, many infections)

**Alopecia and nail disorders** (alopecia areata, androgenetic alopecia <male pattern, female pattern>, tricotillomania, tinea capitis, traction alopecia, loose anagen syndrome, anagen effluvium, telogen effluvium)

**Skin flags for underlying anatomical abnormalities** (hair tufts, hemangiomas, vascular malformations, …)

**Injuries** (solar damage, burns, cold injury, child abuse and neglect, pressure ulcers, pyogenic granuloma)

**Dermatitic eruptions** (atopic dermatitis, contact dermatitis <irritant, allergic>, diaper dermatitis, …)

**Vascular reactions** (urticaria, pernio, …)

**Papulopustular disorders** (erythema toxicum, pustular melanosis, acne vulgaris, rosacea, infections and infestations)

**Genodermatoses** (tuberous sclerosis, neurofibromatosis)

**Manifestations of endocrine, metabolic and nutritional disorders** (acanthosis nigricans, alopecia <hyperthyroidism, hypothyroidism>, xanthelasma)

**Connective tissue and other systemic diseases** (SLE, dermatomyositis, Kawasaki syndrome, erythema nodosum)

**General signs of systemic illness** (central cyanosis, jaundice)
### Classification of Skin Disorders: How You Can Usefully Organize the Conditions You Will Be Expected to Know (Continued) - (lists below may not be fully complete)

<table>
<thead>
<tr>
<th>Classification</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pigmentary disorders</strong></td>
<td>café-au-lait spots, freckles, lentigines, Mongolian spots, nevus spilus; pityriasis alba, vitiligo, post-inflammatory hypopigmentation and hyperpigmentation, …</td>
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<tr>
<td><strong>Drug eruptions</strong></td>
<td>exanthematous, urticarial &lt;including anaphylaxis&gt;, erythema multiforme, Stevens-Johnson syndrome, toxic epidermal necrolysis</td>
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<tr>
<td><strong>Purpura</strong></td>
<td>Henoch-Schoenlein disease, meningococcemia, Rocky Mountain spotted fever</td>
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<tr>
<td><strong>Disorders of keratinization</strong></td>
<td>ichthyosis vulgaris, seborrheic keratoses</td>
</tr>
<tr>
<td><strong>Newborn conditions</strong></td>
<td>erythema toxicum, pustular melanosis, miliaria &lt;crystallina, rubra, pustulosa&gt;, epidermolysis bullosa, nevus sebaceous</td>
</tr>
<tr>
<td><strong>Vascular birthmarks</strong></td>
<td>capillary hemangioma, capillary malformations salmon patches, port wine stains</td>
</tr>
<tr>
<td><strong>Pediatric exanthems</strong></td>
<td>roseola, erythema infectiosum, …</td>
</tr>
<tr>
<td><strong>Disorders of dermis and subcutaneous tissues</strong></td>
<td>granuloma annulare</td>
</tr>
<tr>
<td><strong>Sclerosing and atrophying conditions</strong></td>
<td>striae, …</td>
</tr>
<tr>
<td><strong>Neoplasms</strong></td>
<td>nevocellular nevi (moles), juvenile xanthogranuloma, basal cell carcinoma, keratoacanthoma, actinic keratosis, squamous cell carcinoma, malignant melanoma, cherry angioma, spider nevus, lipoma, dermatofibroma, skin tag, Paget’s disease, …</td>
</tr>
<tr>
<td><strong>Infections and infestations</strong></td>
<td>impetigo, folliculitis, cellulitis, abscess, verruca vulgaris, molluscum contagiosum, scabies, lice, arthropod bites, varicella, herpes zoster, herpes simplex, roseola, scarlet fever &lt;streptococcal, staphylococcal&gt;, staphylococcal scalded skin syndrome, erythema infectiosum, hand-foot-mouth-and buttock disease, Lyme disease, disseminated gonorrhea, genital ulcers &lt;primary syphilis, herpes simplex, chancroid, granuloma inguinale, lymphadenoma venereum, Behcet’s syndrome&gt;, genital papules (verruca vulgaris, molluscum contagiosum, scabies, pink pearly papules&gt;, smallpox, monkeypox, tinea versicolor, sporotrichosis, onychomyosis, …</td>
</tr>
<tr>
<td><strong>Bites and stings</strong></td>
<td>common arthropod bites, spider bites, snake bites, hymenoptera stings</td>
</tr>
</tbody>
</table>
Although this course is focused on dermatology, it will prepare you to approach clinical problems across all systems with effectiveness and efficiency. The diagnostic methods and process which guide us most reliably and efficiently to best treatment are the same for all single system and multisystemic problems: history; physical; synthesis and recognition of the clinical pattern in front of you; generation of a differential – a list of contending patterns of disease and injury which share some of those features; pruning that list by identifying clinical discrepancies in the clinical patterns of the contenders, constructed from their own typical histories and customary exam findings, which are incompatible with the pattern in front of you; then, if necessary and only then, using carefully selected diagnostic tests as tiebreakers; and, finally selecting the best intervention based upon evidence of its benefit and risk. This is the process your teachers in this course use every day and will demonstrate for you. And it is the process which, by maximizing quality and minimizing cost, adds the most value to medical care delivered.

Every student who devotes herself or himself appropriately to the learning opportunity ahead will pass this course. The course coordinator promises to do his best to ensure that all of you who apply yourselves will gain a useful working knowledge of relevant dermatological conditions and valuable insights into clinical problem-solving.

All of you can reach me by email (hiramcatfish@gmail.com) with content questions and I will respond in a reasonably timely manner. All administrative questions should be directed first to Cheryl Luick (luick@msu.edu)

I look forward to an important, interesting and useful course. I will do my best to meet those goals.