INTRODUCTION .................................................................................................................................................. 3
GENERAL SCHEDULING INFORMATION ........................................................................................................ 6
ADVANCED INTEGRATION REQUIREMENTS – CLASS OF 2011 ........................................................................ 8
  Model .............................................................................................................................................................. 10
  General Major ................................................................................................................................................. 11
  Surgery Major .................................................................................................................................................. 12
  Advanced Integration Online Course Request Form ....................................................................................... 13
OPPORTUNITIES IN THE STATE OF MAINE .................................................................................................... 14
FOURTH YEAR ROTATIONS at MAINE MEDICAL CENTER ......................................................................... 16
VERMONT AREA HEALTH EDUCATION CENTERS (AHEC) NETWORK OVERVIEW ..................................... 17
  Northeastern Vermont Area Health Education Center (AHEC) ..................................................................... 19
  Champlain Valley Area Health Education Center (AHEC) ......................................................................... 32
  Southern Vermont Area Health Education Center (AHEC) ....................................................................... 46
  Electives at Rutland Regional Medical Center ............................................................................................... 47
ELECTIVE ROTATIONS AT FLETCHER ALLEN HEALTH CARE & MAINE MEDICAL CENTER. 55
  Teaching Requirement ................................................................................................................................... 56
  Reading Month .............................................................................................................................................. 60
  Community Preceptorship ............................................................................................................................ 61
BASIC SCIENCES ............................................................................................................................................. 62
  Anatomy ......................................................................................................................................................... 64
  Pathology ....................................................................................................................................................... 66
  Pharmacology ............................................................................................................................................... 75
CLINICAL SCIENCES ......................................................................................................................................... 76
  Family Medicine ........................................................................................................................................ 76
  Anesthesiology .......................................................................................................................................... 90
  Medicine .................................................................................................................................................... 94
  Neurology ................................................................................................................................................... 131
  Psychiatry .................................................................................................................................................. 139
  Obstetrics and Gynecology ......................................................................................................................... 149
  Pediatrics ................................................................................................................................................... 160
  Radiology ................................................................................................................................................ 179
  Orthopaedics and Rehabilitation .................................................................................................................. 190
  Surgery .................................................................................................................................................... 196
  Emergency Medicine ................................................................................................................................. 220
Introduction

This catalogue outlines the Advanced Integration program available to students between March 2010 and April 2011. The intent of the program is to provide students with a curriculum that will meet their individual needs and goals.

Visiting students who wish to participate in clinical electives at the University of Vermont College of Medicine should visit the website, www.med.uvm.edu for information and application materials.

In Advanced Integration students may elect either the Surgery Major or the General Major.

- **Faculty Advisors**
  Before registering for Advanced Integration courses, the student will request a faculty member to serve as their advisor. The advisor will work with the student on a continuing basis as a counselor both for Advanced Integration and for planning subsequent graduate medical education. The student is expected to take the initiative in maintaining regular contact with the faculty member. It is important that students meet with advisors on a regular basis throughout Advanced Integration to review both their performance and their postgraduate career plans.

Students may have additional “informal” advisors. However, only the formally identified advisor may sign off on scheduling forms, and only the formally identified advisor receives copies of evaluations. Students may change advisors. The Student Affairs Office must be notified in writing of such a change.

- **Supplemental Maine Advisor for Maine Residents**
  Students who are residents of Maine are required to select a Maine physician to serve as a source of information about training and practice opportunities in Maine. The Maine advisor can be a faculty member at Maine Medical Center (MMC) or a physician elsewhere in Maine. If the Maine advisor is a faculty member, they may also serve as the student's faculty advisor, depending on student preference. Unless you plan on spending the majority of Advanced Integration in Maine, you should also select an advisor at UVM.

- **Time Schedule**
  Each Advanced Integration rotation lasts for one calendar month. There are 14 such rotations. The Dean's Discretionary Period extends from May 1, 2011 until graduation day May 22, 2011. Changes in rotations will take place on the first day of the month.

- **Required Rotations**
  All students are required to include in their schedules a one-month long acting internship (AI) in the Department of Medicine, an emergency medicine elective, and either a one-month teaching practicum or completion of a scholarly project. Students who select the General Major must complete one additional AI and students who select the Surgery Major must complete two additional AIs. The AIs must be under the supervision of College of Medicine faculty and are therefore limited to Fletcher Allen Health Care (FAHC) or Maine Medical Center (MMC). Students who select the General Major must also include one month of SURG 9550 Surgery Subspecialty Rotation. Students in the Surgery Major must also complete a surgical pathophysiology review course and a month of gross anatomy or autopsy pathology. More specific information is included in this catalogue under the section entitled “General Scheduling Information.”

- **Vacation Periods**
  All students are permitted two vacation periods of one month each within Advanced Integration. An additional month may be authorized on an individual basis by the Associate Dean for Student Affairs for compelling personal reasons. Free time over holiday periods will be arranged at the discretion of the department in which a student is working at the time. A reading month taken to prepare for the USMLE examination is not counted as vacation.
**Changing Your Schedule**

Changes must be requested at least two months in advance of the desired rotation change and must be approved by the student’s advisor, the coordinator of the rotation the student wishes to drop, and the coordinator of the rotation the student wishes to add in that order. Add/Drop forms are available in the Student Affairs Office and online at www.med.uvm.edu. Signatures are required from each of the three parties approving the change. Email approvals are also acceptable.

An Acting Internship may not be dropped except under very extenuating circumstances or unless a replacement is found by the student wishing to drop the AI.

The master schedule with information on rotation openings is maintained online at https://comis.med.uvm.edu/ReportCenter. This should be consulted before discussing a possible program change with the advisor.

**Whereabouts**

It is important that the Student Affairs Office know where students can be reached at all times during Advanced Integration. This is particularly true of extramural rotations. Advanced Integration is a time when regular communication needs to be maintained between the Student Affairs Office and students for such matters as:

- Residency Applications
- Medical Student Performance Evaluations (MSPEs)
- Matching Results for PGY1 year
- Graduation Plans

It is the student’s responsibility to keep the Student Affairs Office informed of his or her whereabouts, including current telephone numbers, whether here or away.

**Extramural Rotations**

During Advanced Integration, students may choose to seek a period of study away from the College of Medicine. Such extramural rotations are encouraged. They must have educational benefit and be approved by the advisor one month before the rotation.

To plan an extramural rotation, a student must obtain an Extramural Elective Application Form from the Student Affairs Office, on Comet, or online at www.med.uvm.edu. After completing the student section, the student must discuss the particulars of the proposed elective with his or her advisor. If the advisor approves, the application must be returned to the Student Affairs Office for review and final action on the request. No form for faculty evaluation of the student will be sent to the extramural site until the extramural approval form is received in the Student Affairs Office. It is in the student’s own interest to assure that his or her work at extramural sites can be evaluated in a timely fashion. Extramural sites generally require documentation of student status and other information, which will be provided by the Student Affairs Office.

The appropriate course number to use on request forms for an extramural rotation is MD1090.

**Elective Rotations with Plattsburgh Physicians**

If a student wishes to work with a physician practicing in the Plattsburgh area via an "Extramural Rotation" or "Community Preceptorship," it is important we notify the administration at Champlain Valley Physicians Hospital ahead of time of such an arrangement. They are obligated by the state of New York to monitor and document the work of medical students. This includes not only the Clerkship students but also Advanced Integration students who may be at CVPH either full-time or part-time as part of an elective experience.

Please inform the Student Affairs Office if you plan a rotation that may involve your presence at CVPH. Housing is not available at the hospital for students taking electives in the Plattsburgh area.
Grading within Advanced Integration

The College regulations state that the grade of "honors" can only be awarded by faculty of UVM College of Medicine. Most of the clinical staff at the Maine Medical Center hold part-time UVM faculty appointments.

It is unlikely that individuals who evaluate and grade students’ work during an extramural rotation will be UVM faculty members. An "honors" grade awarded on an extramural rotation will be recorded as "pass" for the purpose of the student’s transcript. The student’s Medical Student Performance Evaluation will refer to such a grade as "Honors (unofficial)."

Residents at FAHC and MMC who submit student evaluations and wish to award the grade of "honors" must secure the co-signature of a faculty member of the College of Medicine.
General Scheduling Information

In planning your Advanced Integration program you should consider what elective experiences (courses) are most desirable to meet your personal and professional goals. You should then consult with your advisor to discuss specific career decisions. When you have an idea of the kinds of courses you want to take, you will be better able to deal with the specifics of the scheduling process. Your advisor’s signature will be required on your completed form.

There are five required rotations for General Majors with additional requirements for Surgery Majors. The details of these requirements are discussed under the Advanced Integration Requirements on page 9, and in the General Major and Surgery Major examples following the section “Preparing an Advanced Integration Schedule.”

Surgery majors will be allowed to preschedule the two required surgery Acting Internships. The third acting internship will be scheduled via the computer process.

Each student in the General Major will be allowed to preschedule one of the two required Acting Internships. The second required Acting Internship will be scheduled via the computer process.

Prescheduling will work as follows:

Each department will hold a prescheduling meeting in Vermont. There will be a telephone connection to students at Maine Medical Center. Students who cannot be present should send a friend to represent them or contact the department coordinator. The following Acting Internships can be prescheduled:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Department &amp; Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>FM1120</td>
<td>AI Family Medicine, FAHC</td>
</tr>
<tr>
<td>FM1121</td>
<td>AI Family Medicine, MMC</td>
</tr>
<tr>
<td>MDPS3550</td>
<td>AI Inpatient Psychiatry, FAHC</td>
</tr>
<tr>
<td>MDPS3556</td>
<td>AI Inpatient Psychiatry, MMC</td>
</tr>
<tr>
<td>MED2503</td>
<td>AI Medicine, MMC</td>
</tr>
<tr>
<td>MED2504</td>
<td>AI Cardiology, MMC</td>
</tr>
<tr>
<td>MED2516</td>
<td>AI Medicine, FAHC</td>
</tr>
<tr>
<td>MED2518</td>
<td>AI Cardiology/CCU Service, FAHC</td>
</tr>
<tr>
<td>MED2522</td>
<td>AI Hematology/Oncology Service, FAHC</td>
</tr>
<tr>
<td>MED2530</td>
<td>AI Critical Care Medicine, MMC</td>
</tr>
<tr>
<td>MED2578</td>
<td>AI Nephrology, MMC</td>
</tr>
<tr>
<td>NEUR3501</td>
<td>AI Neurology – Neurology Ward Service</td>
</tr>
<tr>
<td>OBGY4503</td>
<td>AI General Obstetrics, FAHC</td>
</tr>
<tr>
<td>OBGY4504</td>
<td>AI Gynecologic Oncology, FAHC</td>
</tr>
<tr>
<td>OBGY4506</td>
<td>AI Maternal-Fetal Medicine, FAHC</td>
</tr>
<tr>
<td>OBGY4510</td>
<td>AI Gynecologic Oncology, MMC</td>
</tr>
<tr>
<td>OBGY4511</td>
<td>AI Maternal-Fetal Medicine, MMC</td>
</tr>
<tr>
<td>ORTH8506</td>
<td>AI Orthopaedic Surgery, FAHC</td>
</tr>
<tr>
<td>PED5501</td>
<td>AI Pediatrics, FAHC</td>
</tr>
<tr>
<td>PED5502</td>
<td>AI NICU Pediatrics, FAHC</td>
</tr>
<tr>
<td>PED5514</td>
<td>AI Pediatrics, MMC</td>
</tr>
<tr>
<td>PED5516</td>
<td>AI Newborn ICU, MMC</td>
</tr>
<tr>
<td>SURG9501</td>
<td>AI Surgical Critical Care, FAHC</td>
</tr>
<tr>
<td>SURG9506</td>
<td>AI Thoracic &amp; Cardiac Surgery, FAHC</td>
</tr>
<tr>
<td>SURG9508</td>
<td>AI Neurosurgery, FAHC</td>
</tr>
</tbody>
</table>
All other Acting Internships listed on page 12 in the catalogue, plus any of the Acting Internships remaining available in the Departments of Surgery, Obstetrics and Gynecology, Pediatrics, Medicine, and Family Medicine after they have completed their prescheduling meetings will be scheduled through the computer.

All forms must be turned in to Emma Faustner in the Student Affairs Office. It is the student's responsibility to make sure the form is completed correctly, signed by the advisor, and submitted by the deadline. Students should keep a copy of their form.

There are several pages for you to refer to while creating your schedule. The Advanced Integration Requirements Example lists requirements for Surgery and General majors. The Model is an example of a student's desired schedule. The General Major and Surgery Major sections provide information on requirements. The Request Form Instructions explain briefly how to fill in the request form. An example of a completed Request Form for a General Major is also included. This example can be found following the section on Preparing an Advanced Integration Schedule.

- **Description of the Scheduling Process**
  Scheduling for Advanced Integration is done through a computer algorithm that takes into account each student’s requests and priorities. The algorithm randomizes the list of students several times throughout processing to ensure that each student has an equal chance at getting their highest priority requests.

  Requests are gathered through an online course request form, available on the Student Affairs web page. The URL for this form is:

  https://comis.med.uvm.edu/ADVCourseRequests

  This catalogue, as well as a user’s guide for the scheduling software also are available online.

- **Preparing a Schedule for Advanced Integration**
  In the Advanced Integration package you will receive at the class meeting, you will be provided with an instruction sheet and a hard copy of the electronic Advanced Integration request form. You will also be given a presentation/training on the use of the electronic form.

  Once you have completed the electronic form you must “finalize” it and print a copy. Please note: The form must be printed and then signed by your advisor before handing it in to the Student Affairs Office. Failure to do this could result in your requests being processed after all other students’ requests have been processed. After a form has been finalized, you will be able to view it but not change it. You should keep copies of your completed forms for your records.

- **Course List**
  For Advanced Integration you will be scheduling courses for 14 months, beginning in March 2010, and ending in April 2011. As you draw up your schedule, you can refer to the model included as an example preparation list. This model represents a student’s ideal schedule. Alongside each course the student has indicated the order of importance of that course.

  Prepare a list in order of importance to you, of the courses you want to take. Include any required courses as your higher priority courses. You can list as many courses as you’d like, though you will be registered for no more than one course in any month.
**Advanced Integration Requirements – Class of 2011**

**All students are required to take one Acting Internship in Internal Medicine between March 2010 and February 2011. Students may choose one of the following to fulfill this requirement:**
- MED 2503 AI Medicine: MMC (3 students/month)
- MED 2516 AI Medicine:FAHC (4 students/month)
- MED 2522 AI Hematology/Oncology Service:FAHC (1 student/month)
- MED 2578 AI Nephrology:MMC (1 student/month)

Students must pass USMLE Step 1 and USMLE Step 2 Clinical Knowledge before January 1, 2010, and must take USMLE Step 2 Clinical Skills before May 1, 2011.

**EMERGENCY MEDICINE** is required for both the General Major and the Surgery Major. It may be done in an adult emergency department away from FAHC. Students taking Emergency Medicine away from FAHC must pass a test at FAHC after the rotation.

*Additional requirements for each major are listed below.*

**GENERAL MAJOR**

1 Acting Internship of student’s choice
- choice of discipline
- Fletcher Allen or MMC
- 31 options

1 Teaching Requirement (MD 1005)/Scholarly Project Requirement (MD 1006) of student’s choice
- choice of VIC Foundations course or scholarly project
- UVM, FAHC or MMC for scholarly project

Must be completed by March ’10

SURG 9550 Surgery Subspecialty Month
- 2 wks each of 2 subspecialties
- Fletcher Allen or MMC
- Must be completed by Feb ‘10

7 electives
- 1 Optional reading month (MD 1080) to prepare for USMLE

Reading month is not vacation

Usually 2 months vacation, 1 used for interviews

**SURGERY MAJOR**

ATLS Course (held in February and April)

SURG 9511 Surgical Pathophys Course (Mar ’10 or ’11)

2 Acting Internships
- ORTH8506 AI Orthopaedic Surgery
- SURG9501 AI Surgical Critical Care
- SURG9506 AI Thoracic & Cardiac Surgery
- SURG9508 AI Neurosurgery
- SURG9515 AI Pediatric Surgery
- SURG9516 AI Surgery
- SURG9518 AI Otolaryngology
- SURG9519 AI Urology
- SURG9520 AI Plastic Surgery

Anatomy (Choose one)
- ANAT 1002 Anatomical Dissection (February)
- ANAT 1003 Anatomical TA (June, July, August, or December, no TA prosection for Summer months)
- MD 1005 Teaching Requirement for HSF, Anatomic dissection, embryology, and imaging Team (October or November - This is open to all students)
- PATH 1052 Autopsy Pathology

6 electives
- 1 Optional reading month (MD 1080) to prepare for USMLE

Reading month is not vacation
- *Scholarly project

Usually 2 months vacation, 1 used for interviews

**TOTAL** 14 months

**TOTAL** 14 months
Surgery Majors may change to the General Major anytime on or before September 1, 2010 and then must complete all requirements of the General Major. General Majors may change to the Surgery Major at anytime provided they can fulfill all the requirements of the Major.

*Surgery majors may plan a month to concentrate on their projects or they may complete it during other rotations.

Students who fail either Step 1 or Step 2 of USMLE may take a second reading month if they wish.

Students may take one month for family or medical leave if circumstances require it. This includes maternity leave and paternity leave.

A single rotation may not be used to satisfy 2 separate graduation requirements.
### Model

#### General Major

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Start Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>SURG 9503</td>
<td>Clinical Emergency Medicine:MMC</td>
<td>3/1/08</td>
</tr>
<tr>
<td>PED 5503</td>
<td>Pediatric Pulmonology</td>
<td>4/1/08</td>
</tr>
<tr>
<td>MED 2516</td>
<td>AI Medicine</td>
<td>5/1/08</td>
</tr>
<tr>
<td>PED 5511</td>
<td>Pediatric Infectious Diseases</td>
<td>6/1/08</td>
</tr>
<tr>
<td>SURG 9550</td>
<td>Surgery Subspecialty Rotation</td>
<td>7/1/08</td>
</tr>
<tr>
<td>MD 1080</td>
<td>Reading Month</td>
<td>8/1/08</td>
</tr>
<tr>
<td>MD 1090</td>
<td>Extramural</td>
<td>9/1/08</td>
</tr>
<tr>
<td>PED 5514</td>
<td>AI Pediatrics, MMC</td>
<td>10/1/08</td>
</tr>
<tr>
<td>***</td>
<td>Vacation/Interviews</td>
<td>11/1/08</td>
</tr>
<tr>
<td>MD 1090</td>
<td>Extramural</td>
<td>12/1/08</td>
</tr>
<tr>
<td>PED 5508</td>
<td>Sports Medicine</td>
<td>1/1/09</td>
</tr>
<tr>
<td>ORTH 8508</td>
<td>Ski Injury Clinic – Sugarbush</td>
<td>2/1/09</td>
</tr>
<tr>
<td>FM 1127</td>
<td>Ecosystem Change and Human Health</td>
<td>3/1/09</td>
</tr>
<tr>
<td>***</td>
<td>Vacation</td>
<td>4/1/09</td>
</tr>
</tbody>
</table>
**General Major**

**Acting Internships (AIs):**

1. Two of the following required AIs:

   - FM1120 AI Family Medicine: FAHC
   - FM1121 AI Family Medicine: MMC
   - MDPS3550 AI Inpatient Psychiatry
   - MDPS3556 AI Inpatient Psychiatry: MMC
   - MED2503 AI Medicine: MMC*
   - MED2504 AI Cardiology: MMC
   - MED2516 AI Medicine*
   - MED2517 AI on MICU Service: FAHC
   - MED2518 AI Cardiology/CCU Service
   - MED2522 AI Hematology/Oncology Service*
   - MED2530 AI Critical Care Medicine: MMC
   - MED2578 AI Nephrology: MMC*
   - NEUR3501 AI Neurology
   - OBGY4503 AI General Obstetrics
   - OBGY4504 AI Gynecologic Oncology
   - OBGY4506 AI Maternal-Fetal Medicine
   - OBGY4510 AI Gynecologic Oncology: MMC
   - OBGY4511 AI Maternal-Fetal Medicine: MMC
   - ORTH8506 AI Orthopaedic Surgery
   - PED5501 AI Inpatient Pediatrics: FAHC
   - PED5502 AI ICN Pediatrics
   - PED5514 AI Pediatrics: MMC
   - PED5516 AI Newborn ICU: MMC
   - SURG9501 AI Surgical Critical Care: FAHC
   - SURG9505 AI Surgical Critical Care: MMC
   - SURG9506 AI Thoracic & Cardiac Surgery
   - SURG9508 AI Neurosurgery
   - SURG9515 AI Pediatric Surgery
   - SURG9516 AI Surgery
   - SURG9518 AI Otolaryngology
   - SURG9519 AI Urology
   - SURG9520 AI Plastic Surgery
   - SURG9530 AI Vascular Surgery: MMC
   - SURG9531 AI General/Trauma Surgery: MMC
   - SURG9532 AI Pediatric Surgery: MMC
   - SURG9533 AI Transplant Surgery, MMC

   * indicates AIs that fulfill the Medicine Acting Internship requirement.

2. The required Surgery Subspecialty Rotation SURG9550. This must be taken between March 2010 and February 2011.

   Exemption from SURG9550 requires written approval from the Department of Surgery. Please have an Alternative Fulfillment of Requirement Form completed to verify approval. Exemption means the requirement is met by approved alternative means.

3. The required Emergency Medicine elective. This may be taken away from FAHC.

4. The remainder of your electives. Limited electives, i.e. those with capacities less than 99, should receive higher prioritization, as they are likely to fill first.
**Surgery Major**

1. Your two prescheduled Surgery AIs.

2. One of the following:
   
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANAT1002</td>
<td>Anatomical Dissection</td>
</tr>
<tr>
<td></td>
<td>(offered in February only)</td>
</tr>
<tr>
<td>ANAT1003</td>
<td>Anatomy TA</td>
</tr>
<tr>
<td></td>
<td>(special approval required)</td>
</tr>
<tr>
<td>PATH1052</td>
<td>Autopsy Pathology</td>
</tr>
</tbody>
</table>

3. Surgical Pathophysiology Review Course

4. The Scholarly Project in Surgery. If you want to set aside a month to work on this, you may request it as a specific course as follows:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>SURG9595</td>
<td>Scholarly Project</td>
</tr>
</tbody>
</table>

   Since it is not required to set aside a specific month, you do not have to request it at all.

5. The one required Acting Internship in the Department of Medicine.

6. The required Emergency Medicine elective. This may be taken away from FAHC.

7. The remainder of your electives. Limited electives, i.e. those with capacities less than 99, should receive higher prioritization, as they are likely to fill first.
UNIVERSITY OF VERMONT
COLLEGE OF MEDICINE

Advanced Integration Online Course Request Form

INSTRUCTIONS

Fill in course numbers with priority designated. The most desired course should have a lower number (i.e., 1 is highest priority) and the lower priority courses should have a higher number. No two course requests can have the same priority number.

You can save your work by clicking on the “Save” button. This will allow you to come back and continue to work on the form until it is completed. When you click save, the form will be validated to ensure it meets with basic validation rules. It will not be validated to ensure that the guidelines described above have been met.

When you have completed the form, click on the “Finalize” button. A final validation will be performed, and you will be instructed to correct any problems. After you have corrected the problems, your requests will be saved and you will not be able to make any further changes, though you will still be able to view and print the requests.

After you have finalized your requests, you can print the form, have your advisor sign it, and then submit it to the Student Affairs Office for final approval. This approval is required for your requests to be processed with the rest of the class. Failure to submit and receive this approval in a timely manner may result in your requests being processed after the rest of the class.
Opportunities in the State of Maine

All students are welcome to participate in Advanced Integration rotations in Maine. Students who are residents of Maine are particularly encouraged to spend some elective time in their home state.

FAMILY MEDICINE PRECEPTORSHIP SITES:

Family Medicine Preceptorship opportunities are available at any of the four family medicine residency sites in Maine, or at a variety of family medicine sites in the community. Addresses for the residency programs are:

Central Maine Medical Center Family Medicine Residency
76 High Street
Lewiston, Maine 04240
Contact person: Deborah Taylor, MD, telephone 207-795-2803; fax 207-795-2190

Eastern Maine Medical Center Family Medicine Residency
895 Union Street, Suite 12
Bangor, Maine 04401-3010
Contact person: Julie Burwell, telephone 207-973-7303; fax 207-973-7673

Maine-Dartmouth Family Medicine Residency
15 East Chestnut Street
Augusta, Maine 04330
Contact person: Davene Fitch, telephone 207-626-1894; fax 207-626-1902

Maine Medical Center Family Medicine Residency
22 Bramhall Street
Portland, Maine 04102
Contact person: Pip Marrotte, telephone 207-662-2875; fax 207-662-6055

IDENTIFICATION OF NEW FAMILY MEDICINE PRECEPTORSHIPS, COMMUNITY PRECEPTORSHIPS, AND RURAL HEALTH SITES:

The following agencies and organizations have a wealth of information about opportunities for community based medical education in Maine. Please call them if you would like help in arranging a placement in Maine.

Maine Ambulatory Care Coalition
P.O. Box 390
Manchester, Maine 04351
Contact person: Jim Dowling, telephone 207-621-0677; fax 207-621-0577

Area Health Education Center (AHEC) System
Hills Beach Road
Biddeford, Maine 04005
Contact person: Shirley Weaver, PhD, telephone 207-283-0171, at ext. 2437; fax 207-294-5931
HOSPITAL-BASED ROTATIONS:

Eastern Maine Medical Center
489 State Street
Bangor, Maine 04401
Contact person: Julie Burwell, telephone 207-973-7303

Eastern Maine Medical is a tertiary care hospital offering clinical rotations in the following disciplines: Anesthesiology, Cardiology, Chemical Dependency Treatment/Psychiatry, Emergency Medicine, Family Medicine, Gastroenterology, Internal Medicine, Neurology, Obstetrics and Gynecology, Hematology-Oncology, Orthopaedics, Pathology, Pediatrics, Pulmonary Medicine, Radiology, Rehabilitation, and Surgery. Free housing is provided by reservation, with the optional use of a health and fitness facility.

Maine Medical Center
22 Bramhall Street
Portland, Maine 04102
Contact person: Anne Marquis, 207-662-7060

Maine Medical Center offers Acting Internships, which fulfill our requirement for AIs in the disciplines of Critical Care, Surgery, Family Medicine, Medicine, Psychiatry, and Pediatrics, including both Ward Pediatrics and Neonatal Intensive Care. Electives in a variety of specialties are also available as shown on the following list. Some of these are listed in the ADVANCED INTEGRATION course catalogue must be scheduled through the computer process, while others may be arranged through Anne Marquis and the concerned departments. Free housing is provided in Thomas House on a space available basis.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANES1502</td>
<td>Anesthesiology, MMC</td>
</tr>
<tr>
<td>FM1121</td>
<td>AI Family Medicine, MMC</td>
</tr>
<tr>
<td>FM1122</td>
<td>Ambulatory FM Rotation, MMC</td>
</tr>
<tr>
<td>MD1086</td>
<td>Maine Internal Medicine Community Preceptorship</td>
</tr>
<tr>
<td>MDPS3556</td>
<td>AI Inpatient Psychiatry, MMC</td>
</tr>
<tr>
<td>MDPS3557</td>
<td>Child Psychiatry, MMC</td>
</tr>
<tr>
<td>MDPS3558</td>
<td>Emergency &amp; Consult Psychiatry, MMC</td>
</tr>
<tr>
<td>MDPS3559</td>
<td>Clinical Assessment in a Multicultural Environment, MMC</td>
</tr>
<tr>
<td>MED2503</td>
<td>AI Medicine, MMC</td>
</tr>
<tr>
<td>MED2504</td>
<td>AI Cardiology, MMC</td>
</tr>
<tr>
<td>MED2507</td>
<td>Clinical Cardiology, MMC</td>
</tr>
<tr>
<td>MED2512</td>
<td>Clinical Infectious Diseases, MMC</td>
</tr>
<tr>
<td>MED2530</td>
<td>AI Critical Care Medicine, MMC</td>
</tr>
<tr>
<td>MED2542</td>
<td>Pain &amp; Palliative Care;MMC</td>
</tr>
<tr>
<td>MED2577</td>
<td>Clinical Nephrology, MMC</td>
</tr>
<tr>
<td>MED2578</td>
<td>AI Nephrology, MMC</td>
</tr>
<tr>
<td>MED2580</td>
<td>Clinical Pulmonary Medicine, MMC</td>
</tr>
<tr>
<td>OBGY4510</td>
<td>AI Gynecologic Oncology, MMC</td>
</tr>
<tr>
<td>OBGY4511</td>
<td>AI Maternal-Fetal Medicine, MMC</td>
</tr>
<tr>
<td>PED1093</td>
<td>Pediatric Subspecialty, MMC</td>
</tr>
<tr>
<td>PED5514</td>
<td>AI Pediatrics, MMC</td>
</tr>
<tr>
<td>PED5516</td>
<td>AI Newborn ICU, MMC</td>
</tr>
<tr>
<td>RAD7510</td>
<td>Radiology Clerkship, MMC</td>
</tr>
<tr>
<td>SURG9505</td>
<td>AI Surgical Critical Care, MMC</td>
</tr>
<tr>
<td>SURG9530</td>
<td>AI Vascular Surgery, MMC</td>
</tr>
<tr>
<td>SURG9531</td>
<td>AI General/Trauma Surgery, MMC</td>
</tr>
<tr>
<td>SURG9532</td>
<td>AI Pediatric Surgery, MMC</td>
</tr>
<tr>
<td>SURG9533</td>
<td>AI Transplant Surgery, MMC</td>
</tr>
<tr>
<td>SURG9503</td>
<td>Clinical Emergency Medicine, MMC</td>
</tr>
<tr>
<td>SURG9504</td>
<td>Medical Toxicology, MMC</td>
</tr>
<tr>
<td>SURG9507</td>
<td>Emergency Department Research, MMC</td>
</tr>
</tbody>
</table>
AHEC is a statewide program working to strengthen Vermont’s community health systems and the health of Vermonters; it is a partnership between the Northeastern Vermont AHEC, Champlain Valley AHEC, Southern Vermont AHEC, and the University of Vermont College of Medicine Office of Primary Care AHEC Program. The three community-based centers have assigned regions that cover the state’s 14 counties.

AHEC represents a true academic-community partnership and provides a link between the University of Vermont College of Medicine and Vermont’s communities. Each center is a separate 501(c)(3), non-profit organization governed by a local board of directors that includes community leaders and health care practitioners. AHEC promotes delivery of health care that is responsive and relevant to community needs and community health improvement.

The mission of AHEC is “to improve Vermont’s public health by establishing educational partnerships with Vermont communities, health professionals, and its health training programs”. AHEC achieves this by collaborating with multiple organizations and by linking academic resources of the University with local planning, educational, and clinical resources. AHEC programs play a vital role in providing medical, nursing, physical therapy, allied health, and social work students and Fletcher Allen Health Care residents an opportunity to observe the benefits, rewards, and challenges of delivering health care in rural or medically underserved areas. At the community level, continuing education programming and interdisciplinary quality improvement initiatives with primary care practitioners are conducted to meet local needs.

The three regional AHEC Centers are:

- The **Northeastern Vermont AHEC** located in St. Johnsbury serving Essex, Lamoille, Orange, Orleans, and Washington counties.

- The **Champlain Valley AHEC** located in St. Albans serving Addison, Chittenden, Franklin, and Grand Isle counties.

- The **Southern Vermont AHEC** located in Springfield serving Bennington, Rutland, Windham, and Windsor counties.

**The Value of an AHEC Rotation**

AHEC can assist students through the following resources:

- Tailor rotations to meet student’s special interests
- Support for involvement in community-based health projects
- Opportunities to participate in interdisciplinary activities
- Housing for rural rotations
- Mileage assistance for remote training
- Computer generated literature searches and delivery of journal articles

AHEC can assist community faculty with the following resources:
- Faculty development workshops
- Educational loan repayment assistance
- Educational and quality improvement programs
- Preceptor certificates for continuing medical education courses

For more information contact the UVM AHEC Program at 802-656-2179 or ahec@uvm.edu.
Electives in Northeastern Vermont AHEC region:

The Northeastern Vermont AHEC offers an opportunity to experience the rewards and challenges of rural community practice through its support of UVM medical students’ placements with preceptors in its region for clinical rotations. The six counties included in this region are Orleans, Essex, Caledonia, Orange, Washington, and Lamoille.

To assist students in choosing clinical rotation sites, the Northeastern Vermont AHEC has made available up-to-date preceptor and primary care practice site information books. AHEC can also assist with access to educational resources while off-campus, gas cards, and in arranging housing when needed. For access to these resources, visit your family medicine, pediatrics or internal medicine clerkship coordinator.

The Northeastern Vermont AHEC staff is eager to assist students to connect to the local networks and resources that provide high quality primary care, and to participate in community health improvement activities.

For more information about the Northeastern Vermont AHEC, visit their website at [www.nevahec.org](http://www.nevahec.org).
COURSE NO: SURG1090
Title: General Surgery in the VT Community
Faculty: David Butsch, MD
3270 Airport Road Berlin
Barre, VT 05641
802-229-4434
Time Commitment: 1 month
Months Offered: By Arrangement
Enrollment: 1 student per month
Visiting Students: No

Course Description

Goals: This course will allow a fourth year student to explore the variety of surgical cases cared for by a general surgeon in a Central Vermont community. The student will have an opportunity to gain experience and training in general surgical principles working with an experienced surgeon in a community setting.

Format: The student will participate in office pre- and post-operative care and in hospital operative care. (Central Vermont Medical Center)

Evaluation Methods: Performance will be evaluated using the Advanced Integration Evaluation Form.
COURSE NO: OBGY1090
Title: Obstetrics & Gynecology
Faculty: Community-based part-time academic faculty at various practices in Vermont. Contact the OB/GYN medical student clerkship coordinator at (802) 847-4736 for availability.
Time Commitment: One month as 2 two-week blocks, or one month block
Months Offered: February 2010 - January 2011
Enrollment: 1-4 students per month
Visiting Students: Available if not requested by UVM students 3 months in advance

Course Description

Goals: The student will expand his or her practical knowledge of women’s health care in various settings, be exposed to a teamwork approach to effective care for women, and increase understanding of the social and institutional factors that influence this care.

Format: At least two months beforehand, the students must contact the OB/GYN medical student clerkship coordinator at 847-4736 for a list of participating offices and physicians for the month requested. The student will then contact the office in question so that schedules can be formalized and specific objectives discussed.

The student will participate in the various practices in office, hospital, and rural settings. The student is encouraged, depending on the advisor and resources and affiliated staff (midwives, nurses and other practitioners) to pursue interests related to the practice chosen. The student is also encouraged to attend Grand Rounds and other departmental seminars as time permits.

Evaluation Methods: Performance will be evaluated using the Advanced Integration Evaluation Form.
COURSE NO: MED1090
Title: Internal Medicine
Faculty: Carol Vassar, MD
150 Main Street
Montpelier, VT 05602
802-223-1766

Time Commitment: 1 month
Months Offered: By Arrangement
Enrollment: 1 student per month
Visiting Students: No

Course Description

Goals: This course will show the student the quality of life as a single practitioner in a private practice (with shared call duty), and as a parent and active community member, and will give the student an opportunity to become more confident during the month.

Format: The student will be involved in a downtown Montpelier internal medicine practice serving a predominance of middle-aged females and emphasizing prevention. The student is encouraged to pursue personal medical interests with a supportive, collegial staff. Dr. Vassar’s interests include overweight/obesity prevention, promotion of exercise, and furthering the cause of improving clinical medical research. There is also an ongoing request for the student to share with the preceptor new information, both clinical and technological. When she has hospitalized patients, students are welcome to make Rounds either before Dr. Vassar or with her.

Evaluation Methods: Performance will be evaluated using the Advanced Integration Evaluation Form.
**Course Description**

**Goals:** This course will provide the student with experience and knowledge in the area of clinical family medicine in a small town setting. The student will gain exposure to the common medical problems seen in family medicine and gain appreciation for the patient member of a community and family. The student will also gain appreciation for the practice styles of community family practitioners.

**Format:** The student will be involved in daily office hours as well as hospital Rounds. Teaching will be oriented around individual patient encounters. Overnight housing is available on the premises of Copley Hospital by arrangement.

**Evaluation Methods:** Performance will be evaluated using the Advanced Integration Evaluation Form.
COURSE NO: PED1090
Title: Pediatrics
Faculty: Thomas Moseley, MD and Alexandra Bannoch, MD
Newport Pediatrics and Adolescent Medicine
121 Medical Village Drive
Newport, VT 05855
802-334-5929

Time Commitment: 1 month
Months Offered: By Arrangement
Enrollment: 1 student per month
Visiting Students: No

Course Description

Goals: This course will provide students with an opportunity to experience day-to-day pediatric office practice and interact with patients on a one-to-one basis in a rural setting. Emphasis on offering a medical home to children with complex needs.

Format: In addition to clinical work in the office and community hospital, the student will be exposed to psychosocial issues and will be offered special interest opportunities in the community such as childbirth preparation classes, home and school visits with community agencies, and introduction to the practical workings of a private practice. The practice consists of two pediatricians, a nurse practitioner, a full-time social worker and a part-time nutritionist.

Evaluation Methods: Performance will be evaluated using the Advanced Integration Evaluation Form.
COURSE NO: MED1090
Title: Internal Medicine
Faculty: Robert Trembley, MD (contact); Peter Harris, MD; Christopher Rickman, MD; and Veronika Jedlovsky, MD
Community Medical Associates
41 Medical Village Drive
Newport, VT 05855
802-334-3504
Time Commitment: 1 month
Months Offered: By Arrangement
Enrollment: 1 student per month
Visiting Students: No

Course Description

Goals: To provide the student with a stimulating learning experience in a 3 physician/3 mid-level rural practice. Dr. Robert Trembley and Dr. Christopher Rickman are board certified internists. Dr. Rickman also does stress testing one half day per week. Dr. Peter Harris is a med/peds specialist, boarded in both internal medicine and pediatrics. The student will have a chance to work with all of the physicians in the practice, as well as a few sessions in the outpatient pulmonary clinic with Dr. Veronika Jedlovsky.

Format: The student will be expected to follow hospitalized patients in addition to seeing primary care patients in the office and nursing home settings. The student will also have the opportunity to be involved in cardiac stress testing, and the pulmonary consultation and procedure clinic. Emphasis will be placed on assessment skills, verbal and written presentations, and differential diagnoses.

Evaluation Methods: Performance will be evaluated using the Advanced Integration Evaluation Form.
Course Description

Goals: This course will provide the fourth year student with a broad and in depth rural experience in family medicine. The student will gain in medical knowledge and in an understanding of community health care delivery.

Format: The student will be involved in a busy family medicine office as well as hospital Rounds. This family medicine office serves as the center for student health for Norwich University in Northfield, and therefore includes an excellent experience in adolescent and young adult care, as well as community family medicine. This office also has a telemedicine connection which staff utilizes for conferences and consultations.

Evaluation Methods: Performance will be evaluated using the Advanced Integration Evaluation Form.
**Course Description**

**Goals:** This course will show the student the professional and personal challenges and rewards of primary care medicine in a rural community.

**Format:** The student will participate in office hours at a clinic with one physician, two physician assistants and two nurse practitioners in Orleans, a small rural and blue-collar community. The student will make Rounds on hospitalized patients from the practice at North Country Hospital. The student will make home visits and nursing home visits, as available during rotation. The student will participate in activities related to problem-oriented and health-maintenance issues in a family medicine office environment. There will also be orientation to the business of private practice. Emphasis will be placed on documentation in private practice, and choosing the appropriate codes.

**Evaluation Methods:** Performance will be evaluated using the Advanced Integration Evaluation Form.
COURSE NO: PED1092
Title: Pediatric Medicine
Faculty: Laura Murphy, MD; Karyn Patno, MD; Mark Price, MD; and Elaine Stasny, MD
St. Johnsbury Pediatrics
97 Sherman Drive
St. Johnsbury, VT 05819
802-748-5131
Time Commitment: 1 month
Months Offered: By Arrangement
Enrollment: 1 student per month
Visiting Students: No

Course Description

Goals: This course will encourage the student to become independent and take full responsibility (under close monitoring) in caring for children and adolescents.

Format: The student will work in a busy pediatric practice strongly rooted in serving the local community through clinical practice and patient education. The student will deal with patients for well child visits and sick visits. The student will learn about common childhood illnesses, behavioral problems and well childcare in a rural setting. The student will get the opportunity to see newborns in the hospital, and hospitalized patients.

Evaluation Methods: Performance will be evaluated using the Advanced Integration Evaluation Form.
**Course Description**

**Goals:** This course will expose students to all aspects of a busy, rural family medicine practice.

**Format:** Students will have exposure to a variety of family medicine hands-on care. This practice is very knowledgeable about families, community, and up-to-date care and education of patients. The student will work in this practice as part of a team atmosphere.

**Evaluation Methods:** Performance will be evaluated using the Advanced Integration Evaluation Form.
COURSE NO: FM1090
Title: Family Medicine
Faculty: Marlene Bristol, FNP; Steve Genereaux, MD; Fay Homan, MD; and Harry Rowe, MD
Wells River Clinic
65 Main St
Wells River, VT 05081
802-757-2325

Time Commitment: 1 month
Months Offered: By Arrangement through Family Medicine 656-4330
Enrollment: 1 student per month; not all months are available
Visiting Students: No

-----------------------------------------------

Course Description

Goals: This course will teach and/or hone clinical skills in family medicine.

Format: The student will be part of busy primary care with outpatient and inpatient responsibility. The student will get intimate exposure to a rural community with an attendant broad range of obstetrics, pediatrics, geriatrics, hospice, and nursing home patients. Requirements: energy, open-mindedness, enthusiasm.

Evaluation Methods: Performance will be evaluated using the Advanced Integration Evaluation Form.
COURSE NO: MED1090  
Title: Rural Medicine  
Faculty: Sharon Fine, MD  
Danville Health Center  
Danville-Peacham Road  
Danville, VT 05828  
802-695-2512  

Time Commitment: 1 month  
Months Offered: By Arrangement  
Enrollment: 1 student per month  
Visiting Students: No  

-----------------------------------------------

Course Description

Goals: The student will be exposed to rural family medicine.

Format: This is a busy clinical rotation in a rural, federally qualified health center in Northeastern Vermont. The student will be involved in inpatient and outpatient care. The student will be exposed to a small rural community. Housing will be provided in the community.

Evaluation Methods: There will be constructive feedback throughout the elective and the students will also be evaluated by using the Advanced Integration Evaluation Form.
Electives in Champlain Valley AHEC region:

The Champlain Valley AHEC supports University of Vermont medical students in locating preceptors and completing their clinical rotations in the Champlain Valley AHEC region. The region includes Addison, Chittenden, Franklin, and Grand Isle Counties.

Support may include providing local housing and travel reimbursement/gas cards, offering opportunities to network with colleagues, and engaging in community health-related projects. For access to these resources, visit your family medicine, pediatrics or internal medicine clerkship coordinator.

The Champlain Valley AHEC staff is eager to assist students to connect to the local networks and resources that provide high quality primary care, and to participate in community health improvement activities.

For more information about CVAHEC, visit their website at www.cvahc.org.
**COURSE NO:** FM1090  
**Title:** Family Medicine  
**Faculty:** James Bergman, MD; John Brooklyn, MD; Patti Fisher, MD; Rachel Inker, MD; Jed Lowy, NP; Lee Orsky, PA; Margaret Russell, PA; David Simcoe, DO; Wayne Warken, MD; and Jennifer Willingham, MD  
Community Health Center of Burlington  
617 Riverside Avenue  
Burlington, VT 05401  
802-864-6309  

**Time Commitment:** 1 month  
**Months Offered:** By Arrangement through Family Medicine 656-4330  
**Enrollment:** 1 student per month; not all months are available. Will accept a maximum of 3 students per year. Schedule to be coordinated by CHCB Medical Director.  
**Visiting Students:** No

---

**Course Description**

**Goals:** Students will:  
1. Develop clinical skills appropriate to primary care practice.  
2. Enjoy benefits and be familiar with the challenges of providing high-quality, cost-effective health care to a diverse patient population including indigent and non-English speaking immigrants.  
3. Learn to understand the interdisciplinary team approach to health care.

**Format:** Students will be exposed to direct patient care in a community health center with a culturally and socioeconomically diverse urban population. Students will be preceptored by family physicians and physician assistants. Students will also be exposed to medical social work and homeless health care. Students may also be exposed to our 3 off-site clinics: Homeless Health Clinic, Spectrum Clinic for runaways and troubled adolescents, and school based clinics for elementary school-age children.

**Evaluation Methods:** Performance will be evaluated using the Advanced Integration Evaluation Form.
**COURSE NO:** FM1090  
**Title:** Family Medicine  
**Faculty:** Kristin Burdick, MD; Candace Fraser, MD; Heather Holmes, PA; Joanne Hunt, FNP; Alicia Jacobs, MD; Stephanie Kehoe, MD; Anya Koutras, MD; Nancy Morris, ANP; Angela Paoli, LiCSW; Sahir Patel, MD; Thomas Peterson, MD; Allan Ramsay, MD; Barb Rouleau, NP; Clint Seger, MD; Marga Sproul, MD; and Deb Thompson, PA.; Counselor and Phlebotomist on site.  
Colchester Family Practice Health Center  
883 Blakely Road  
Colchester, VT 05446  
802-847-2055

**Time Commitment:** 1 month  
**Months Offered:** By Arrangement through Family Medicine 656-4330  
**Enrollment:** 1 student per month; not all months are available  
**Visiting Students:** No

---

**Course Description**

**Goals:** This is primarily an outpatient rotation with opportunities to observe a full range of family medicine care including obstetrics patients and procedures. Students can benefit from the FAHC-UVM educational setting. Colchester is one of the 4 FAHC FM sites and has a large suburban patient base.

**Evaluation Methods:** Performance will be evaluated using the Advanced Integration Evaluation Form.
**COURSE NO:** PED1090  
**Title:** Pediatrics  
**Faculty:** Paul M. Costello, MD; Steve Hale, MD; Elizabeth Jillson, MD; and David Stifler, MD  
89 Main Street  
Essex Junction, VT 05452  
802-879-6556

**Time Commitment:** 1 month  
**Months Offered:** By Arrangement  
**Enrollment:** 1 student per month; not all months are available  
**Visiting Students:** No

-------------------------------------------------------------------------------------------------

**Course Description**

**Goals:** This course will provide students with an opportunity to experience day-to-day pediatric office practice and interact with patients on a one-to-one basis.

**Format:** Students will work with a panel of practitioners in their practice seeing patients under supervision. Readings and seminars will supplement clinical experience.

**Evaluation Methods:** Performance will be evaluated using the Advanced Integration Evaluation Form.
Course Descriptions

Goals: Students will gain exposure to rural family medicine. Our office (Georgia Health Center) serves northwestern Vermont with patients traveling from as far away as the Canadian border. Our office utilizes Fletcher Allen Health Care, as well as the community hospital in St. Albans, Northwestern. Each student spends time during the rotation with each provider, therefore getting exposure to different practice styles and patient population. Hospital and newborn Rounds are included. Procedures include laceration repair, IV fluid administration, lesion excision, endometrial biopsy, and cryotherapy.

Format: Each student is given a schedule at the beginning of the rotation and works with all five providers.

Students will be expected to work evening hours in the office with the assigned provider.

Arrangements can be made for patient home visits and community involvement.

Evaluation Methods: Performance will be evaluated using the Advanced Integration Evaluation Form.
Course Description

Goals: This course will provide students with an opportunity to experience a day-to-day pediatric office practice and interact with patients on a one-to-one basis in a rural setting.

Format: Students will see outpatients in an office setting during scheduled clinic hours.

Evaluation Methods: Performance will be evaluated using the Advanced Integration Evaluation Form.
COURSE NO: FM1090
Title: Milton Family Practice Ambulatory Month
Faculty: Attending Physicians at Milton Family Practice
        28 Centre Drive
        Milton, VT 05468
        802-847-4322
Time Commitment: 1 month
Months Offered: All
Enrollment: 1 student per month
Visiting Students: Yes

Course Description

Goals: The purpose of this month is to provide training in ambulatory skills of Family Medicine at the FAHC/UVM Family Medicine Residency training center in Milton, Vermont. Enrollment is encouraged for senior students with a strong interest in applying to this residency program.

Format: Students work at Milton Family Practice, seeing patients with attending physicians on the Residency faculty and with current residents in the program.

Evaluation Methods: The student’s performance will be evaluated by the faculty using written forms. Honors will be awarded for outstanding performance.

Students will evaluate the Preceptorship using written forms to be submitted to the Department of Family Medicine.
COURSE NO: FM1090
Title: Family Medicine
Faculty: Allyson Bolduc, MD; Anya Koutras, MD; Robert Luebbers, MD; Norman Ward, MD; and Gary Weischedel, MD
South Burlington Family Practice
11775 Williston Road
South Burlington, VT 05403
802-847-8500

Time Commitment: 1 month
Months Offered: By Arrangement through Family Medicine 656-4330
Enrollment: 1 student per month, maximum 3 students per year; not all months are available
Visiting Students: No

Course Description

Goals: This one-month program is designed to provide experience in comprehensive primary care in a suburban family medicine setting. With a brand-new facility and a rapidly growing practice, this clerkship offers a unique opportunity to work with established preceptors. Providers share interests in pediatrics, adult medicine, obstetrics, orthopaedics, and sports medicine. Available procedures including endometrial biopsy, skin biopsy, and cryotherapy. Hospital Rounds, nursing home care, home visits, and other activities can be included in the rotation.

Format: 1. Students will be assigned to one of the physicians and be in the office approximately 5 days per week.
2. Some flexibility in working with different providers may be needed to accommodate schedules.
3. Community projects, research projects and other activities can also be arranged.

Evaluation Methods: Students will be evaluated on daily performance with the preceptor, based on fund of knowledge, patient care skills, and other qualities. Ongoing and scheduled feedback will be given.
<table>
<thead>
<tr>
<th>COURSE NO:</th>
<th>PED1090</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title:</td>
<td>Pediatrics</td>
</tr>
<tr>
<td>Faculty:</td>
<td>Chip Chiappinelli, MD; John DiMichele, MD; Fred Holmes, MD; Daniel Larrow, MD; Madeline Mann, FNP; Roya Mansoorani, MD; and Joseph Nasca, MD; Deanne Haag, MD (Enosburg office) Mousetrap Pediatrics 11 Crest Road St. Albans, VT 05478</td>
</tr>
<tr>
<td>Time Commitment:</td>
<td>1 month</td>
</tr>
<tr>
<td>Months Offered:</td>
<td>By Arrangement</td>
</tr>
<tr>
<td>Enrollment:</td>
<td>6 students per month; not all months are available</td>
</tr>
<tr>
<td>Visiting Students:</td>
<td>No</td>
</tr>
</tbody>
</table>

**Course Description**

**Goals:** This course will provide the student with an opportunity to experience a day-to-day pediatric office practice and interact with patients on a one-to-one basis in a rural setting.

**Format:** In addition to clinical work in the office and community hospital, the student will be exposed to psychosocial issues and will be offered special interest opportunities in the community such as childbirth preparation classes, home and school visits with community agencies, an introduction to the practical workings of a private practice, as well as high school clinic one day a week.

**Evaluation Methods:** Students will be evaluated on daily performance with the preceptor, based on fund of knowledge, patient care skills and other qualities. Ongoing and scheduled feedback will be given.
Course Description

Goals: This course will provide the student with an opportunity to experience a day-to-day small group rural pediatric practice with a community hospital affiliation.

Format: The student will be exposed to pediatric and adolescent health care in 2 pediatric offices. One is housed in a community center with other child-centered agencies and the second is in an office adjacent to the local hospital. There will also be opportunities to make home visits, attend deliveries, and participate in case conferences with other community agencies. Conferences will take place in the local community hospital and Fletcher Allen.

Evaluation Methods: Students will be evaluated by the preceptor, based on fund of knowledge, patient care skills, and other qualities. Ongoing and scheduled feedback will be given.
COURSE NO: FM1090
Title: Family Medicine
Faculty: Stewart Manchester, MD; Toby Sadkin, MD; and Terri Nielsen, MD
St. Albans Primary Care
9 Crest Road
St. Albans, VT 05478
Time Commitment: 1 month
Months Offered: By Arrangement through Family Medicine 656-4330
Enrollment: 1 student per month; not all months are available
Visiting Students: Yes

Course Description

Goals: During this one-month clerkship the goal is for the student to gain experience in a semi-rural family medicine office and community hospital setting. There will be exposure to a full range of family medicine (pediatric through geriatric, including obstetrics) and office procedures such as suturing, splinting, casting, and endometrial biopsy.

Format: The student will be assigned primarily to one physician for the month but at times may work with, and be supervised by, other physicians in the office. The setting will be mostly outpatient visits in the office, however if a patient is admitted to the hospital the student will participate in the hospital care. The office hours will correspond to that of the supervising physician – mostly 8:30 a.m. - 5 p.m. with occasional evening hours until 7 p.m.

Evaluation Methods: Performance will be evaluated using the Advanced Integration Evaluation Form.
COURSE NO: MED1090
Title: Internal Medicine
Faculty: Frank Zsoldos, Jr., MD, FACP
Mid North Medical Group
156 North Main Street
St. Albans, VT 05478
802-524-2106
Time Commitment: 1 month
Months Offered: By Arrangement
Enrollment: 1 student per month; not all months are available
Visiting Students: No

Course Description

Goals: This course will provide students with an experience of the professional and personal challenges and rewards of primary care in a rural setting.

Format: Students will see outpatients in an office setting during scheduled clinic hours.

Evaluation Methods: Performance will be evaluated using the Advanced Integration Evaluation Form.
COURSE NO: OBGY1090  
Title: Obstetrics & Gynecology  
Faculty: Community-based part-time academic faculty at various practices in Vermont. Contact the OB/GYN medical student clerkship coordinator at (802) 847-4736 for availability.  
Time Commitment: One month as 2 two-week blocks, or one month block  
Months Offered: March 2010 – February 2011  
Enrollment: 1-4 students per month  
Visiting Students: Available if not requested by UVM students 3 months in advance

Course Description

Goals: The student will expand his or her practical knowledge of women’s health care in various settings, be exposed to a teamwork approach to effective care for women, and increase understanding of the social and institutional factors that influence this care.

Format: At least two months beforehand, the students must contact the OB/GYN medical student clerkship coordinator at 847-4736 for a list of participating offices and physicians for the month requested. The student will then contact the office in question so that schedules can be formalized and specific objectives discussed.

The student will participate in the various practices in office, hospital, and rural settings. The student is encouraged, depending on the advisor and resources and affiliated staff (midwives, nurses and other practitioners) to pursue interests related to the practice chosen. The student is also encouraged to attend Grand Rounds and other departmental seminars as time permits.

Evaluation Methods: Performance will be evaluated using the Advanced Integration Evaluation Form.
COURSE NO:         SURG1090
Title:             General Surgery Preceptorship
Faculty:           Joseph M. Salomone, MD and Michelle M. Sowden, D.O.
                   One Crest Road
                   St. Albans, VT 05478
                   802-524-2779
Time Commitment:  Monday – Friday 8:00 a.m. to 5:00 p.m.
Months Offered:   By Arrangement
Enrollment:       1 student per month
Visiting Students: Yes

................................................................................................................

Course Description

Goals: This course will allow the student to experience life as a private practice general surgeon in Vermont.

Format: Students will shadow a general surgeon in the following settings:
  • Office visits
  • Outpatient procedures (colonoscopy, EGD, minor procedures)
  • Operating room

Evaluation Methods: Performance will be evaluated using the Advanced Integration Evaluation Form. The evaluation is subjective based on attendance, interest and basic fund of knowledge.
Electives in Southern Vermont AHEC region:

The Southern Vermont AHEC assists University of Vermont medical students in locating preceptors in the southern region of the state. The region includes Rutland, Windsor, Bennington, and Windham Counties.

The assistance may include providing local housing and travel support/gas cards, offering opportunities to network with colleagues, and attending continuing education events and supporting community-based projects. For access to these resources, visit your family medicine, pediatrics, or internal medicine clerkship coordinator.

The Southern Vermont AHEC staff is eager to assist students to connect to the local networks and resources that provide high quality primary care, and to participate in community health improvement activities.

For more information about SVAHEC visit their website at www.southernvermontahec.org.
The Medical Director of Rutland Regional Medical Center, Dr. Baxter Holland, and many of the medical staff at Rutland Regional Medical Center invite University of Vermont medical students to take rotations with them. Southern Vermont AHEC will arrange housing and Rutland Regional Medical Center has made arrangements for meal tickets at the hospital.
COURSE NO: MED1092
Title: Community Based General Urology
Faculty: Ernest M. Bove, MD
Mid Vermont Urology
145 Allen St., P.O. Box 666
Rutland, VT 05702-0666
802-775-6006
email: midvturo@sover.net

Time Commitment: 1 month
Months Offered: By Arrangement
Enrollment: By Arrangement
Visiting Students: No

Course Description

Goals: Students will experience community-based urology by working one-on-one with a Board Certified Urologist. There will be a full range of urologic, surgical and nonsurgical interventions, inpatient, outpatient, and first surgical assist. There will also be the opportunity to participate in inpatient and outpatient procedures.

Format: Students will be part of morning Rounds in surgery on Tuesday and Thursday, with outpatient clinic on Monday and Wednesday mornings, and on Friday. Call is not required. Student’s time will be educational only.

Evaluation Methods: Performance will be evaluated using the Advanced Integration Evaluation Form.
**Title:** Intensive Care Medicine

**Faculty:** Harvey S. Reich, MD, FCCP, FACP
Medical Director, Cardiopulmonary Services
Rutland Regional Medical Center
160 Allen Street
Rutland, VT 05701
802-747-3851

**Time Commitment:** 1 month

**Months Offered:** By Arrangement

**Enrollment:** By Arrangement

**Visiting Students:** No

---

**Course Description**

**Goals:** The goal of the Intensive Care Medicine Rotation at Rutland Regional Medical Center is to gain knowledge and experience in the management and care of patients needing acute care services for stabilization and treatment of their underlying disease. The thrust of this will be to understand the pathophysiologic alterations, which occur in acute illness, and how this, coupled with organ system interactions, guides therapy.

The experience should enable the student to experience the complexity and multidisciplinary approach to the care of the ICU patient. Emphasis will be placed on treatment of the patient as a whole rather than organ system specific. The student should come to appreciate the intensivists role as the primary care practitioner for the ICU.

**Format:** The ICU at RRMC is a multidisciplinary unit composed of acute care medical, surgical, cardiology, and neurosurgical patients. The unit is 13 beds and there is an adjacent 17-bed step-down/telemetry unit. While there is a myriad of primary and subspecialist attendings involved in the care of these patients, the students’ supervision, direction, and education will be by physicians trained in critical care medicine.

The student will be expected to:

1. Round and follow selected ICU patients daily. Weekend and night on call is not required.

2. Attend a core lecture series which will include the following topics:
   a. acid/base disorders
   b. acid/base disorders
   c. hemodynamics/shock/pulmonary artery catheter analysis and insertion/esophageal Doppler monitor analysis and insertion
   d. hemodynamics/shock/pac/edm
   e. fluid balance/renal insufficiency
   f. ventilator management/nippv
   g. ventilator management/nippv
   h. copd/asthma exacerbation/pe/hemoptysis/ards
   i. copd/asthma exacerbation/pe/hemoptysis/ards
   j. endocrine emergencies
   k. sepsis/coagulopathy/adrenal insufficiency
   l. post-operative management/intra-abdominal hypertension/surgical emergencies/trauma
   m. critical care cardiology
   n. GI bleed/hepatic failure
   o. neurologic emergencies/icp monitoring
p. intubation/central & arterial line placement
q. nutrition
r. pharmacology/toxicology
s. end of life/family care issues
t. student presentation

3. Prepare and present one topic per week for discussion.
4. Assist and insert arterial, central venous, and pulmonary artery catheters as clinically indicated.
5. Learn airway management skills – bag mask, NPPV, and intubations.
6. Attend multidisciplinary ICU Rounds.
7. Attend other medical lectures as desired.

Evaluation Methods: Performance will be evaluated using the Advanced Integration Evaluation Form.
COURSE NO: MED1097
Title: Rheumatology
Faculty: Douglas L. Dier, MD
98 Allen Street
Rutland, VT 05701
802-775-3374; Fax: 802-747-4521
Time Commitment: 1 month
Months Offered: By Arrangement
Enrollment: By Arrangement
Visiting Students: No

Course Description

Goals: Objectives of the course include mastering the musculoskeletal exam, learning to differentiate the common arthritities, and an introduction to various therapeutic modalities. A list of suggested reading will be provided.

Format: The student will be provided the opportunity to observe an office-based rheumatology practice. Ample exposure to the common arthritities will be provided. A problem-oriented medical record is utilized to track these patients in the context of other medical problems.

Evaluation Methods: Performance will be evaluated using the Advanced Integration Evaluation Form.
**Course Description**

**Goals:** The Clinical Clerkship at Wheeler Plastic and Reconstructive Surgery exposes a student to the diversity of plastic and reconstructive surgery.

**Format:**

The student experiences first hand the initial evaluation of the patient's presenting problem, integrating his/her findings into the diagnosis and management of patient care. The evaluation includes relevant social, familial, environmental, psychological, and genetic factors, which influence patient care. The student's opportunity for interpersonal skills will enhance communication to build a strong and effective patient/physician relationship.

The student will be involved in learning surgical techniques, direct hands-on experience the majority of the time, and whenever possible, the opportunity to follow the patient's problem to completion. Unlike the usual concept of plastic surgeons doing only cosmetic surgery, this rotation exposes students to cases involving 50% trauma, 35% congenital, acquired, reconstructive, and 15% cosmetic surgery.

An extensive office library is available in addition to the hospital’s and office’s on-line medical library resources.

Student involvement will be a 40-hour week with encouragement to be involved in off-hour emergency cases as they arise.

Medical staff meetings, practical aspects of office business management and medical practice management are heavily intertwined with the medical requirements of the patient and social responsibilities of the physician. The student can expect to be fully involved in practice, will participate in both inpatient and outpatient surgery, gaining experience in the hospital and office setting. In addition, the student will be exposed to various concepts involving medical liability. Texts and audio tapes will be available for review and discussion. Review of expert witness testimony vs. treating physician testimony will broaden the student's knowledge of the medical/legal aspects of private practice.

Following the clerkship, the student will be able to make a very comprehensive review and analysis with differential diagnoses of what might initially seem to be a simple problem. With exposure to the complementary fields of medicine, surgery, and dentistry, the student will have a better understanding of total patient care.

**Evaluation Methods:**

Performance will be evaluated using the Advanced Integration Evaluation Form.
COURSE NO: SURG1096
Title: Community General Surgery Rotation
Faculty: Brad Jimmo, MD
Maple Tree General Surgery
215 Stratton Road
Rutland, VT 05701
802-775-7745
Time Commitment: Variable, 1 week to 1 month
Months Offered: All
Enrollment: 2 students per month
Visiting Students: Yes

Course Description

Goals: To observe and/or participate in all aspects of a busy private general surgery practice in a community setting in rural Vermont. We perform and provide a wide variety of care ranging from varicose veins to aortic surgery, breast, vascular, and non-cardiac thoracic.

Format: Students will follow a general surgeon in all aspects of practice including office hours, hospital Rounds, house calls, meetings, and operating room. Call is 1 in 5 from home and is designed to be for educational purposes only.

Evaluation Methods: Evaluation will be based on interest, knowledge, diligence, and participation using the Advanced Integration Evaluation Form.
COURSE NO: SURG1097
Title: General Surgery Private Practice
Faculty: Matthew Conway, MD
Rutland Surgical Associates
241 Stratton Road
Rutland, VT 05701
802-775-1903
Time Commitment: Variable
Months Offered: All
Enrollment: 1 student per month
Visiting Students: Yes

Course Description

Goals: This course is an introduction to the breadth of practice of a rural private general surgeon. Goals include improving knowledge base and broadening/honing clinical and technical skills. Students will encounter all aspects of surgery in rural communities, including general, vascular, and thoracic surgery. The student’s responsibilities will be tailored to their goals.

Format: This course is a preceptorship with Dr. Conway, with the possibility of interacting or following his other partner. Significant operating room exposure is anticipated.

Evaluation Methods: Students will receive daily feedback. There will be a small presentation of the student’s choice at the end of the rotation. Objectives will be developed in cooperation with the student.
Elective Rotations at Fletcher Allen Health Care & Maine Medical Center
COURSE NO: MD 1005
Title: Teaching Requirement
Faculty: Eileen CichoskiKelly, Ph.D., Course Director, Foundations Faculty
Time Commitment: 1 month. Permission required contact Teaching Requirement Course Director (Eileen.CichoskiKelly@uvm.edu)

Months Offered: Variable – see descriptions below
Enrollment: Variable – see descriptions below
Visiting Students: No

Course Descriptions

Introduction to Clinical Decision Making (ICDM) Available August 2010
(3 students)
Faculty Contact: Dr. Leah Burke

This is a two week course designed to introduce the three disciplines, Genetics, Ethics and Epidemiology as providing the framework for making informed, appropriate and ethical clinical decisions. These three disciplines will be woven throughout the four years of the Vermont Integrated Curriculum (VIC). The student will need to understand the basic independent concepts and analytic methods of each of the three disciplines as well as an understanding of their integration with respect to clinical decision-making. A variety of instructional formats, including lectures, readings, and small group discussions will be used to attain the course goals.

Responsibilities:
  a) Attend lectures
  b) Co-facilitate small group sessions with a faculty facilitator
  c) Conduct weekly tutoring office hours
  d) Monitor discussion board on COMET
  e) Assist with practice exam and case revisions during and prior to course

Cell and Molecular Biology (CMB): Available September 2010 (3 students)
Faculty Contact: Dr. Jerome Fiekers

Cell and Molecular Biology is a four-week course that addresses the fundamental vocabulary, concepts, and methods of molecular genetics, cell physiology, biochemistry and metabolism including cell-cell and cell-environment communication, cell proliferation and cell death. Students acquire this knowledge through lecture, assigned readings, problem sets, interactive computer modules, and small, medium and large group discussion.

Responsibilities:
  a) Attend lectures
  b) Co-facilitate small group sessions with a faculty facilitator
  c) Conduct weekly review sessions (as a team)
  d) Assist with COMET modules
  e) Assist with Clinical Correlations
  f) Provide review and tutoring sessions

Human Structure and Function (HSF): Available October 2010, November 2010, December 2010 (refer to specific criteria regarding months below)
Faculty Contact: Dr. Elizabeth Ezerman
Human Structure & Function is a twelve-week course designed to familiarize first year medical students with the fundamentals of the composition of the human body and how it performs in the healthy state. This is an integrated study of micro and gross anatomy, physiology, basic imaging principles, embryology and clinical skills. Our diversified team of clinical practitioners and basic scientists coordinate traditional pedagogical methods with innovative and unique computer based lessons and small group learning.

Two Student Teaching Teams are available for HSF:

1) Anatomic dissection, embryology, and imaging Team *(3 students per month October, November open to all students), (3 students for December surgery majors and Ob-Gyn concentration only)*

   Responsibilities:
   a) Dissect and keep ahead of the Foundations students
   b) Assist in every gross anatomy lab session with dissection, answering questions, integrating embryology and imaging material
   c) Attend embryology lectures
   d) Hold review sessions
   e) Assist in preparation of student “morning reporters”
   f) Assist faculty with examinations
   g) Assist with dissection videos for December month TAs

2) Structure-Function Team *(2 students per month for October, November or December*

   Responsibilities
   a) Assist in every microanatomy lab session with answering questions and integrating physiology/ cell and organ function
   b) Attend structure/ function lectures
   c) Assist with Clinical skills session in Patient-Doctor program
   d) Run weekly review sessions
   e) Assist with examinations

Attacks and Defenses: Available January 2011 *(4 students)* and February 2011 to include special teaching project *(2 students)*

Faculty contact: Dr. Bill Raszka

Attacks and Defenses is a six-week course designed to integrate studies in the principles of infectious diseases, immunology, hematology and oncology as well as medical conditions of poison, trauma, and shock. This includes concepts of homeostasis, cell metabolism, and the physical examination and related interviewing, diagnostic testing and imaging.

Responsibilities
   a) Assist in every lab session
   b) Assist with clinical skills
   c) Attend lectures
   d) Co-facilitate small group sessions with a faculty facilitator
   e) Conduct weekly review sessions (as a team of student teachers)

Nutrition, Metabolism, and the GI System: Available February 2011 and March 2011 *(4 students per month)*

Faculty contact: Dr. Paula Tracy

Nutrition, Metabolism and the Gastrointestinal System in Health and Disease is an 8 week course that organizes studies in nutrition, gastrointestinal systems, organ system metabolism and endocrine system through lessons that integrate cell metabolism, normal and pathologic anatomy, pharmacology, physiology, pathophysiology and the physical examination and related interviewing, diagnostic testing and imaging. Learning is facilitated through faculty lectures, computer based tutorials, assigned readings, small group case discussions and workshops for problem solving and skills development. Clinical correlations reinforce the lessons of the community preceptorships. Written examinations are given after each of the
**Neural Sciences:** Available April 2011 (1 student), May 2011(4 students), Summer Physical Therapy Neuroscience Course July 2011 (2 students) and (one student) June, 2011 to span portions of both courses. Faculty Contact: Dr. Cynthia Forehand

Neural Science is a nine week course designed to organize study of the nervous and behavioral system through lessons that integrate cell metabolism, endocrinology, normal and pathologic anatomy, pharmacology, physiology, pathophysiology and the physical examination and related interviewing, diagnostic testing and imaging. Several instructional methods support learning in this course, including lecture, readings from a variety of sources, laboratory sessions, physical examination and interviewing skills sessions, and case discussions prepared by students. Case discussions contain significant unique content and focus on symptoms, differential diagnosis, pathologic anatomy, pathophysiology, genetics, ethics, pharmacology, clinical imaging and laboratory results. Each case will have a videotape case trigger.

Responsibilities:
- a) Assist in all lab sessions
- b) Attend lectures
- c) Assist with instruction in neurologic and mental status examination skills session
- d) Co-facilitate small group sessions with a faculty facilitator
- e) Conduct tutor/review sessions

**Connections:** Available August 2010 (2 students)
Faculty Contact: Dr. Carson Cornbrooks

Connections is a two week course that organizes the study of skin, connective tissue, and the musculoskeletal system through lessons that integrate cell metabolism, endocrinology, normal and pathologic anatomy, pharmacology, physiology, pathophysiology and the physical examination and related interviewing, diagnostic testing and imaging. It is a novel course that will introduce students to the study of the orthopedics, rheumatology and dermatology during the basic sciences.

Responsibilities:
- a) Assist clinical skills sessions
- b) Attend lectures
- c) Co-facilitate small group sessions with a faculty facilitator
- d) Conduct weekly review sessions (as a team)

**Cardiovascular, Respiratory, Renal Systems:** Available September 2010, October 2010 (4 students per month)
Faculty Contact: Dr. William Hopkins

Cardiovascular, Respiratory, and Renal Systems is a 9-week course that organizes studies in the cardiovascular, lymphatic, respiratory, renal, and urinary systems through lessons that integrate cell metabolism, endocrinology, normal and pathologic anatomy, pharmacology, physiology, pathophysiology and the physical examination and related interviewing, diagnostic testing and imaging
Responsibilities:
   a) Assist clinical skills sessions
   b) Assist pathology and physiology lab sessions
   c) Attend lectures
   d) Co-facilitate small group sessions with a faculty facilitator
   e) Conduct weekly review sessions (as a team)

**Generations** Available November and December 2010 (4 students per month)
Faculty Contact: Dr. Bill Pendlebury

Generations is an eight-week course that organizes studies in reproduction and development including those related to pregnancy and birth, childhood and adolescence, adult life, and aging through lessons that integrate cell and molecular biology, endocrinology, normal and pathologic anatomy, pharmacology, physiology, pathophysiology, the physical examination and related interviewing, diagnostic testing and imaging. This course examines variations in presentation of illness, etiology and pathogenesis across cultures and ages.

Responsibilities:
   a) Assist clinical skills sessions
   b) Assist pathology and physiology lab sessions
   c) Attend lectures
   d) Co-facilitate small group sessions with a faculty facilitator
   e) Conduct weekly review sessions (as a team)
COURSE NO:       MD1080  
Title:           Reading Month  
Faculty:         None  
Time Commitment: 1 month  
Months Offered:  All  
Enrollment:      Unlimited  
Visiting Students: No  

Course Description

Goals: The reading month will allow time for self-directed study and review in preparation for the United States Medical Licensing Examination (USMLE).

Format: The student develops his or her own plan of study. Students may take a second reading month for independent study purposes not related to the USMLE. They must identify a faculty supervisor for the month. The faculty supervisor must review the student’s study plan at the beginning of the month and must submit a formal evaluation of the student’s work. The reading month is not considered a vacation month.

Evaluation Methods: None
Flexible Preceptorship

COURSE NO: MD1085
Title: Community Preceptorship
Faculty: Any physician
Time Commitment: 1 month
Months Offered: All
Enrollment: Unlimited
Visiting Students: No

Course Description

Goals: The Community Preceptorship is intended to supplement traditional hospital-based medical education with an experience of medicine as it is practiced outside a major medical center. The student can learn attitudes and skills by working with experienced physicians in a community setting. The Community Preceptorship provides an opportunity to observe how practicing physicians organize and manage their practices and can also provide an opportunity to explore a career option.

Format: The format, content, specialty, and setting are flexible. Students must make their own arrangements for the Community Preceptorship.

Evaluation Methods: The physician preceptor will evaluate performance using the Advanced Integration Evaluation Form. Students will also be expected to evaluate their experience in writing.
of the basic science departments is prepared to offer a student the opportunity to concentrate study in their discipline during the Advanced Integration. While each program would be individually determined, graduate study and research would be expected of each student. Students who meet the requirements for admission to the Graduate College may so enroll as candidates for the degree of Master of Science or as duly admitted students not yet accepted to candidacy.

Each College (Medicine and Graduate) retains its own prerogatives to grant its degree. Thus, the student whose performance meets the standard of the College of Medicine will be awarded the MD degree on completion of the Advanced Integration. When the Master of Science candidate meets the degree requirements of the Graduate College, he or she will be awarded the MS degree. This may or may not coincide in time with the awarding of the MD degree.

Students interested in concentrating in a basic science discipline during the Advanced Integration should contact the appropriate department chairperson.

Anatomy & Neurobiology   Dr. Rodney L. Parsons
Biochemistry              Dr. Kenneth G. Mann
Microbiology & Molecular Genetics   Dr. Susan S. Wallace
Molecular Physiology & Biophysics    Dr. David M. Warshaw
Pathology                 Dr. Edwin G. Bovill
Pharmacology              Dr. Mark T. Nelson
COURSE NO: MD2000
Title: Healthcare Simulation Education
Faculty: Cate Nicholas, MD
Time Commitment: 20 hours/week
Months Offered: All
Enrollment: 1 student per month
Visiting Students: No

Course Description

Goals: 1. To provide the students with an understanding of what healthcare simulation is and its capabilities and limitations to enhance medical education.
2. To allow students to become more facile with simulation equipment, including practice time with specific medical task stations and simulation scenarios.
3. To educate the student in how to develop strong teaching skills regarding questioning, debriefing, and feedback.

Format: 1. Reading from the healthcare simulation literature.
2. Assistance to the staff with performing simulation scenarios.
3. Development of a simulation scenario to be used by the simulation center for further education of medical students and residents.
4. Facilitation in instructing other medical students through the medical task stations, which may include central line placement, arterial line placement, airway management, difficult airways, Foley catheter placement, intravenous access, chest tube placement, nasogastric tube placement, and suturing.

Evaluation Methods: 1. Simulation scenario will be reviewed by the simulation center staff for feasibility/ease of use. The scenario will also be reviewed by at least one simulation physician for accuracy of clinical content.
2. Medical student instruction will be evaluated by both the medical student participants and by a member of the simulation staff for clarity of presentation, knowledge of procedures and their indications, and the ability to interact with medical student participants through questioning for comprehension, debriefing, and feedback.
3. Willingness to participate and attitude during simulations will be assessed by the simulation staff.
Anatomy

COURSE NO: ANAT1002
Title: Anatomical Dissection
Faculty: Elizabeth Ezerman, PhD
Time Commitment: *February 2010
Months Offered: *February 2010
Enrollment: Maximum 20
Visiting Students: With Permission

-----------------------------------------------

Course Description

Goals: The goals of this course are to provide a complete review of specific regions of the body through dissection, oral evaluation, and clinical correlation.

Format: The format of the course includes a thorough dissection of one of four regions of the body:
   1) Head and neck
   2) Thorax and abdomen
   3) Extremities and back
   4) Abdomen, pelvis, and perineum
Each student will present a clinically oriented topic to the whole class, and be evaluated by an oral examination on the specific region (including relevant embryology) chosen for dissection.

Evaluation Methods: Evaluation is based on thoroughness and quality of dissection, oral examination of anatomical knowledge (with expectations above the first year level), and a clinical presentation evaluated by a clinician of the student’s choosing.

* Alternate arrangements can be made for those students scheduled to do Acting Internships during the month of February 2011. During the months of October, November, and December, there are openings for three students each month as Teaching Assistants in the gross anatomy laboratory of Human Structure and Function. Surgery majors only may TA in the December block. There are also opportunities for Surgery Senior Majors to TA during the months of July and August during the summer Gross Anatomy course and the Physical Therapy Gross Anatomy course. (See course ANAT1003).
COURSE NO: ANAT1003  
Title: Anatomical TA  
Faculty: Elizabeth Ezerman, PhD; Jean Szilva, MD; Eileen CichoskiKelly, PhD (Contact person)  
Time Commitment: 1 month  
Months Offered: June, July, August, or December. Permission required.  
Enrollment: 2 students in June, 2 students in July, 2 students in August, 3 students in December  
NOTE: June, July, August are open to Surgery Majors ONLY  
Visiting Students: No  

Course Description

Goals: The gross laboratory in the Human Structure and Function (HSF) course provides an overview of all regions of the human body through dissection and laboratory teaching to first-year medical students. As a TA, students will participate for a one-month period by dissecting the relevant areas (of that month), assist with daily lab instruction, be available for student questions during some evenings, and assist with a gross anatomy exam.

Format: Breakdown by month:
- June: Gross anatomy summer course
- July: Gross anatomy summer course
- August: Physical therapy gross anatomy summer course
- October: Human Structure and Function
  - Back, Upper Extremity, Lower Extremity, Thorax
- November: Human Structure and Function
  - Head and Neck, Abdomen (start)
- December: Human Structure and Function
  - Abdomen (finish), Pelvis and Perineum

Please contact Jean Szilva, MD for additional information about the August session.

HSF Dissection Schedule (2007)
- First exam period: Back, Upper Extremity, Lower Extremity
- Second exam period: Thorax, Head and Neck
- Third exam period: Abdomen, Pelvis and Perineum

Evaluation Methods: Evaluation is based primarily on first-year student TA evaluations, which includes thoroughness of preparation, accuracy of information, anatomical knowledge, interest in students, and enthusiasm for teaching in addition to observations by faculty. In addition to duties in the gross laboratory, TAs are expected to attend gross anatomy lectures and periodically be available for student questions in the evening.

Priority will be given to Surgery Senior Majors scheduled to do Acting Internships in February.

Students should submit their request for specific teaching months during the fall of the previous year.
Pathology

The Advanced Integration rotations in Pathology provide students an opportunity to become familiar with the various facets of anatomic and clinical pathology. Students electing autopsy or forensic pathology will participate in several postmortem examinations, at which time basic concepts of disease are integrated with clinical medicine. On surgical pathology, students examine specimens grossly and microscopically. Students are also encouraged to participate in the activities of the hospital’s clinical laboratory. Here they can work on the correlation of test results with clinical problems. On hematopathology, students examine the full range of hemological specimens, including peripheral blood smears, bone marrows and lymph nodes. The conference schedule of the Department of Pathology allows students an opportunity to participate on a daily basis in decision-making and the evaluation of routine and unusual test procedures and anatomical findings.

The Department of Pathology believes an experience in pathology can provide students with sound and meaningful exposure to the field. Opportunities for an in-depth experience in research exist in the Department of Pathology for those who wish to design a special program.

Advanced Integration rotations for students can be individually designed for students. Although some students enroll to gain an understanding of the field of pathology and its career opportunities, others may select an elective as a means of solidifying their understanding of disease and its diagnosis in anticipation of a career in a particular clinical field.

Pathology Fellowship: The Department of Pathology offers a one-year fellowship position for medical students who have completed their clinical core subjects, regardless of their interest in any particular specialty. The objectives of this program are as follows:

1. To enhance the students’ knowledge of pathology as a field of medical practice.
2. To educate students in the appropriate use of laboratory information in clinical problem-solving.
3. To design a program that will take into consideration the unique needs of each student.
4. To introduce students to the principles of basic and applied research.
5. To help students in their decision whether pathology is a specialty to pursue for their future careers.

Program Description
Selected students participate in a one-year course of study. Student fellows function essentially as first-year house officers on clinical services. Students are assigned to rotations in anatomic, clinical, or experimental pathology. Customarily, students spend 2 months assigned to the autopsy service and 4 months assigned to surgical pathology and one month of transfusion medicine. Under the supervision of the faculty, students learn the basic principles of pathology with emphasis on clinico-pathological correlations. In addition, students are introduced to the technical aspects of anatomic pathology, including specimen dissection and preparation, histological techniques, and specialized diagnostic procedures such as electron microscopy, immunofluorescence and immunohistochemical techniques, molecular genetics, and flow cytometry.

In the remaining 6 months, students elect rotations on other anatomic or clinical pathology services or devote some or all of their time to research under the supervision of a staff member. One month of this elective time can be spent at another institution. The service assignments that students may elect include all of the major subspecialties in pathology, including surgical pathology, autopsy pathology, cytology, neuropathology, pediatric pathology, forensic pathology, dermatopathology, immunopathology, clinical chemistry, microbiology, hematopathology, blood banking, coagulation, cytophysics, molecular biology, and informatics. Emphasis is placed on basic principles of disease and their application to clinical problem-solving. Student fellows are evaluated at the end of each rotation and a summary evaluation is submitted to the Associate Dean for Student Affairs after completion of the year.

Students are fully integrated into the activities of the Department of Pathology. Students participate in all of the departmental conferences and are expected to be presenters at departmental and interdepartmental
conferences. Most students prepare at least one formal presentation. Students also participate in the department’s teaching program for first- and second-year medical students, functioning as teaching assistants and tutors.

Since research training enhances the development of problem-solving skills, all student fellows are expected to undertake a project in conjunction with a faculty member. The elements of this project should include formulation of a hypothesis, development and implementation of a research plan, and analysis of results. The work is expected to be presented at a scientific meeting and to be published in a medical journal.

**Salary and Benefits**
The stipend this year is $16,000. Malpractice coverage is provided by the Department of Pathology. Student loan repayments are deferred for the duration of the fellowship. Basic health insurance provided to medical students is continued. A student activity fee is assessed by the University for a student identification card which entitles the recipient to use the library and athletic facilities. Students are allowed 4 weeks of vacation during the year.

**Application Procedure**
Students are eligible for selection to the student fellowship program after the completion of the basic science and clinical core subjects. A letter of intent, a short personal statement explaining the student’s reason and motivation to undertake the student fellowship and career goals, and curriculum vitae are sufficient for application. All applicants will be interviewed by selected faculty members. Applications to the program will be accepted until September 30. Selections will be announced by November 15.

If interested in exploring this opportunity further, please contact John Lunde, M.D. whose office is in ACC EP1-114, (802-847-5135, email address: john.lunde@vtmednet.org) You might also wish to talk with previous and current student fellows. They can be contacted through Jane Murray at 847-0392, email address: jane.murray@vtmednet.org.
COURSE NO: PATH1052  
Title: Autopsy Pathology  
Faculty: Autopsy Staff (Contact Jane Murray at 847-0392, jane.murray@vtmednet.org)  
Time Commitment: 1 or 2 months  
Months Offered: All except January and July  
Enrollment: 2 students per month  
Visiting Students: Yes

Course Description

**Goals:** This course will enhance the student’s understanding of diseases and their complications by attending and participating actively in autopsies, correlating the clinical record with the findings, and reading about each case.

**Format:** Students will spend one month on the autopsy service, read each clinical record, and participate in the gross and microscopic autopsy to its completion. Students will attend all autopsy conferences and clinical conferences at which autopsy cases are presented. Emphasis will be placed on learning the complications of diseases, case presentation, how to think about diseases in a pathogenetic sequence for enhanced understanding, learning proper death certification, and reading about topics of interest to the student. The student is expected to rotate to forensic pathology, too.

**Evaluation Methods:** Student's participation, contribution to case work-ups, presentation of clinical histories, and ability to describe autopsy findings will be assessed by the autopsy faculty, after an appropriate interval. Students are expected to demonstrate a satisfactory understanding of each case attended, from both the autopsy and from their reading.
COURSE NO: PATH1055
Title: Forensic Pathology
Faculty: Chief Medical Examiner, Steven Shapiro, MD
Elizabeth Bundock, M.D., Ph.D., Deputy Chief Medical Examiner
Time Commitment: 1 month
Months Offered: Any month (except July and August) as pre-arranged the Chief Medical
Examiner’s Office
Enrollment: 1 student per month
Visiting Students: Yes

Course Description

Goals: The objectives of the course are:
1. To acquaint the student with the medical examiner system in the State of Vermont.
2. To provide the student with the opportunity to participate in the functions of the Office of the Chief Medical Examiner, which include death scene investigation and autopsy examination, including X-ray, chemical, and toxicological analyses.
3. To stimulate interest in forensic medicine through practice, library and investigative research, and teaching.

Format: The course involves the day-to-day practice of forensic pathology. It requires the student to accompany the Medical Examiner on scene visits, to participate in medicolegal autopsies, to research special topics of interest, and to learn methods of central record keeping and preparation of statistical reports. A special research project of the student’s choosing is expected.

Evaluation Methods: A critical student evaluation is based on the enthusiasm, willingness, and ingenuity employed in practice and review of autopsy protocols and research papers prepared.
Course Description

Goals: This course will provide exposure to diagnostic clinical/pathologic correlation, and will help the student develop an appreciation of the pathologist's role in patient diagnosis and management.

Format: The students will observe the methods used in describing, processing, analyzing, and interpreting surgical pathology material. They will have an opportunity to see gross and microscopic specimens, frozen sections, and other special materials from all surgical disciplines. They will observe the use of special techniques and their role in diagnosis. A 20-minute presentation related to a topic or case of interest in pathology is required at the end of the rotation.

Evaluation Methods: Several surgical pathology attendings and residents will evaluate each student. A composite evaluation will be compiled by the surgical pathology director reflecting the student's motivation and attentiveness, as well as aptitude for, and appreciation of, techniques used in surgical pathology diagnoses. Preparedness and content of presentation will also be evaluated.
COURSE NO: PATH1059
Title: Neuropathology
Faculty: William W. Pendlebury, MD
Time Commitment: 1 month
Months Offered: All months except July, August and December
Enrollment: 1 student per month
Visiting Students: Yes

Course Description

Goals: This course will provide exposure to neuropathology.

Format: This course will give students a review of major classes of neurological diseases using pathological approaches. Clinical-pathologic correlation is emphasized.

Evaluation Methods: Evaluation is informal.
COURSE NO: PATH1061
Title: Hematopathology
Faculty: Ronald Bryant, MD; Michael Lewis, MD; and John H. Lunde, MD
Time Commitment: One month by arrangement with Dr. Lunde
Months Offered: Dates must be pre-arranged with Dr. Lunde
Enrollment: 1 student per month
Visiting Students: Yes

---------------------------------------------------------------------------------------------------

Course Description

Goals: The objectives of this course are to:
1. Gain experience in review of peripheral blood smears and bone marrow specimens.
2. Provide a comprehensive approach to hematopathology involving the clinical hematology laboratory, morphological hematopathology, and clinical-pathological correlation.
3. Review the hematological aspects of systemic disease.

For interested students, we will cover basic topics in coagulation and orientation to coagulation laboratory techniques.

Format: The content of the course involves:
1. Familiarity with routine and special clinical hematology laboratory procedures.
2. Study of selected morphology problems in bone marrow, spleen, and lymph node.
3. Attendance and participation in clinical and pathology conferences involving hematology problem cases.
4. Participation in daily review of problem cases, bone marrow studies, and consultation material.

Evaluation Methods: Evaluation will be based on:
1. Participation in the activities of the service.
2. Attendance and participation in conferences.
3. Student's approach to problem solving.
4. *Grades - Honors, Pass, Fail

* Based on performance and participation
COURSE NO: PATH1066
Title: Clinical Pathology Elective
Faculty: E.G. Bovill, MD; R. Bryant, MD; M. Fung, MD; M. Lewis, MD; J. Lunde, MD; G. Sharp, MD; M. Tang, MD and W.C. Winn, Jr., MD (contact Dr. Bryant)
Time Commitment: 1 month
Months Offered: All
Enrollment: 1-2 students per month
Visiting Students: Yes

Course Description

Goals: This course will expose students to basic laboratory tests in blood bank, chemistry, hematology, and microbiology with emphasis on test selection and interpretation.

Format: Students spend 2 to 5 days in each of the specialty laboratories. Students may spend time doing bench work and interacting with the staff, but the student more often is an observer. Students are required to attend departmental conferences.

Evaluation Methods: Evaluations are based on attendance and interaction with attending staff.
Grades - Honors, Pass, Fail
Honors based on:
1. Evaluation of “excellent” from each service.
A short paper approved by and graded by director of pertinent clinical service, i.e., chemistry subject — Dr. Sharp.
**Course Description**

**Goals:** Research month(s) may involve either an introductory or in-depth exposure to an ongoing research program.

**Format:** Arrangements for research opportunities can be made with individual staff members.
Pharmacology

The Department of Pharmacology provides opportunities for basic and clinical pharmacological study.

Basic research is conducted in the pharmacology and toxicology of cancer chemotherapeutic agents, ion membrane channels – their isolation and function, isolation and characterization of drug receptors, vascular pharmacology – regulation of vascular smooth muscle and its innervation, their structure and electrophysiology effects of vasoconstrictor, vasodilator, and antihypertensive drugs, experimental vascular disease, including stroke.
Family Medicine is defined by the American Board of Family Medicine as:

...comprehensive medical care with particular emphasis on the family unit, in which the physician's continuing responsibility for health care is neither limited by the patient's age or sex nor by a particular organ system or disease entity.

*Family Medicine is the specialty in breadth which builds upon a core of knowledge derived from other disciplines—drawing most heavily on internal medicine, pediatrics, obstetrics and gynecology, surgery and psychiatry—and which establishes a cohesive unit, combining the behavioral sciences with the traditional biological and clinical sciences. The core of knowledge encompassed by the discipline of family medicine prepares the family physician for a unique role in patient management, problem-solving, counseling and as a personal physician who coordinates total health care delivery.*

Family Medicine requires a comprehensive approach to learning and thus a carefully planned curriculum by each student is necessary to reach individual educational goals. Once the core requirements are met, students interested in Family Medicine are encouraged to meet regularly with their advisor to review course selection, discuss areas of interest, and plan for postgraduate education.

Students interested in Family Medicine should consider selecting an advisor from the full-time faculty of the Department of Family Medicine. Questions should be directed to the Advanced Integration director, Dr. Anya Koutras, at 802-656-4330.
**Course NO:** FM1120  
**Title:** AI Family Medicine, FAHC  
**Faculty:** Attending Physicians on the Family Medicine Inpatient Teaching Service  
**Time Commitment:** 1 month  
**Months Offered:** All  
**Enrollment:** 1 student per month  
**Visiting Students:** Yes

**Course Description**

**Goals:** The goal is to give the student a practical experience on an inpatient team with responsibility for day-to-day care of hospitalized adult medical and obstetrical patients.

**Format:** Students will be assigned to work closely with the third year Family Medicine resident on the Inpatient Teaching Service and will take call with that resident. Learning opportunities include daily teaching rounds, bi-weekly family medicine rounds, subspecialty rounds and a half-day experience in Milton. Students will participate in the Family Medicine Resident Seminars on Wednesday mornings.

**Evaluation Methods:** Performance will be evaluated by the monthly teaching attending, the weekly faculty rounding attendings, the Family Medicine residents, and by performance at the end-of-course CSE. Students will also give a formal Case Presentation.

**ACTING INTERNSHIPS AT FAHC, ONCE SCHEDULED, MAY NOT BE DROPPED WITHOUT A REPLACEMENT.**
**Course Description**

**Goals:** The student will fill the role of an Acting Intern on the family medicine teaching service under the direct supervision of the physician coordinator of the inpatient teaching service and senior family medicine resident. Commensurate with previous experience, the Acting Intern will be expected to assume responsibility for the work-up and management of patients including the initial history, physical examination, evaluation, and assessment of patients admitted to the service. The Acting Intern will take part in all morning reports and attend teaching Rounds and scheduled conferences. The Acting Intern will take night call once every fourth night under supervision of the resident on-call.

**Evaluation Methods:**

The student's performance will be evaluated by the inpatient service coordinator, attending physician, and the supervising resident using written forms.

Students will evaluate the Acting Internship experience using written forms to be submitted to the Department of Family Medicine of the Maine Medical Center.

---

**ACTING INTERNSHIPS AT MMC, ONCE SCHEDULED, MAY NOT BE DROPPED WITHOUT A REPLACEMENT.**
COURSE NO: FM1122
Title: Ambulatory FM Rotation, MMC
Faculty: Faculty of the Family Medicine Residency Program,
         Private Practitioner Preceptors
Time Commitment: 1 month
Months Offered: All months except July
Enrollment: 2 students per month
Visiting Students: Available through MMC

-------------------------------------------------------
Course Description

Goals: The purpose of this clerkship is to provide an in-depth experience in primary care at our
       ambulatory teaching centers in Portland and Falmouth.

Format: The purpose of the clerkship is to provide an in-depth experience in primary care at our
         ambulatory teaching center. We accept 4th year students every month except July. In
         addition to providing patient care at the Family Medicine Center, students also participate
         in resident teaching conferences weekly, spend some time at nursing homes, in sports
         medicine clinic, CAM (Complementary and Alternative Medicine), and are welcome to
         attend morning report on the Family Medicine Inpatient Service.

         At the Family Medicine Center, students see their own patients, who are scheduled every
         45 minutes, to allow time for the patient to be seen and to review each case with the
         preceptor. The faculty and residents also share their interesting cases with students.
         Patient care time is generally seven to eight half-day sessions per week; we do have
         evening hours (until 8 pm) and students may be scheduled to work an occasional evening.
         Most patients will be presenting with acute health problems. When feasible, students are
         matched with a senior resident and a pregnant patient for the last month of the patient’s
         prenatal care and be involved in the delivery. If interested, students may be videotaped
         with a patient and then may review the videotape with a preceptor or member of our
         behavioral science faculty. There is also an opportunity to participate in procedures such
         as vasectomy, colposcopy and skin procedures.

Evaluation Methods: The student's performance will be evaluated by all faculty members and preceptors who
                 work with the student.
COURSE NO: FM1125
Title: Family Medicine: Milton, VT
Faculty: Peggy Carey, MD; John Ferguson, MD; J. Fogarty, MD; John Ferguson, MD; Kim Hageman, MD; Charles Hulse, MD, PhD; Yumi Jarris, MD; John King, MD; Kevin Rodgers, MD; and John Saia, MD
Milton Family Practice
28 Centre Drive
Milton, VT 05468
802-847-4322

Time Commitment: 1 month
Months Offered: By Arrangement through Family Medicine 656-4330
Enrollment: 5-6 students per year; not all months available
Visiting Students: No

Course Description

Goals: Students will gain extensive clinical experience in a family medicine office/residency training site and will participate in formal teaching sessions with residents. They will be the physician of first contact for patients. Students will be exposed to the full range of family medicine (pediatrics through geriatrics, including obstetrics).

Format: Students are assigned to a primary physician for about 50% of the time. The other 50% is spent rotating among providers, doing home visits, or community service. Every Wednesday morning there is a full half-day of teaching sessions and Grand Rounds is in Burlington on Monday morning.

Evaluation Methods: Performance will be evaluated using the Advanced Integration Evaluation Form.
Course Description

Goals: The purpose of the Family Medicine Preceptorship is to involve the student in comprehensive primary health care in the context of family, work, and community. Students will acquire an understanding of the primary care physician's role in the health care system, especially as it relates to continuity of care, preventive medicine, and effective consultant/referral relationships. They will observe and participate in the management of common medical problems in ambulatory care.

Format: Students will work in the offices of their preceptors for a one month period. Preceptors and students will work together to design a rotation appropriate to both the type of practice and the educational needs and interests of the student.

Students may arrange their own preceptorship site, utilizing the resources in the Department of Family Medicine. Contact with Vermont sites is handled directly by the Family Medicine Staff, but students may contact practices outside of Vermont as they wish. Students who self-arrange at a site not previously known to the Department of Family Medicine must get approval in advance.

All students must notify the Department of their preceptorship arrangements at least two months in advance.

Evaluation Methods: The student's performance will be evaluated by the preceptor using written forms. Honors will be awarded in accordance with the description for awarding honors found in the introduction section of this manual.

Students will evaluate the preceptorship using written forms to be submitted to the Department of Family Medicine.
COURSE NO: FM1127
Title: Ecosystem Change and Human Health
Faculty: Charles L. Hulse, MD PhD
Department of Family Medicine
Charles. Hulse@vtmednet.org
(802) 656-5909

Time Commitment: 1 month
Months Offered: March, May, July, September, November, January 2011
Enrollment: Maximum of 8 students per month
Visiting Students: Yes

Course Description

Goals: To advance the learners knowledge and understanding of the interactions between ecosystem health and human physical, mental and spiritual health.

Format: A directed self-study experience. The learner will complete a series of video-/web-/text-based modules focusing on a variety of issues related to environmental change and human health. Topics to be investigated include the health consequences of global warming, ozone depletion, persistent organic pollutants, ozone depletion, endocrine disruptors, loss of biodiversity, pesticide and antibiotic resistance and emerging and re-emerging diseases.

The learner will prepare one short written project (2500 words) describing a current issue related to ecosystem change and human health. Topics are to be approved by preceptor in advance.

The learner will be expected to give a brief (10 to 15 minute) presentation on their project during the final session of the course.

The learner(s) will meet with the preceptor weekly to review content of modules, participate in discussion sessions and review progress on projects. The course discussion sessions will occur on the last four Fridays of each month from 1:30 to 2:30 pm in the Rowell 235 conference rooms. The schedule is subject to change depending on holidays, etc.

Evaluation Methods: Performance will be evaluated using a course-specific form. Emphasis will be placed on completing assigned modules, participation and preparedness in discussion sessions and the written project and oral presentation.
COURSE NO: FM1128  
Title: Introduction to Global Health  
Faculty: Omar Khan, MD MHS FAAAEP, Clinical Assistant Professor, Department of Family Medicine, University of Vermont College of Medicine  
Contact Info: (802) 734-7191, omar.khan@vtmednet.org

Time Commitment: 1 month  
Months Offered: April 09, June 09, Dec 09, Jan 10  
Enrollment: Maximum of 5 students per month  
Visiting Students: At instructor discretion. Please email instructors for permission to apply.

----------------------------------------

Course Description

Goals: The Introduction to Global Health elective is offered as a 1-month discussion-based course. We welcome UVM medical students from all levels; other graduate students; and advanced undergraduate students. Participation should be approved by your advisor/division/school, as applicable.

The following are addressed as part of the course curriculum:

- Basics of epidemiology as applied to global health, with case studies of disease outbreaks.
- Historical background of tropical medicine.
- Models of current global medical care: missionary medicine, relief/refugee work, Medecins Sans Frontieres (MSF), Peace Corps.
- Medical anthropology. Frameworks of health beliefs and cultural constructs of illness.
- Demography, population and family planning, including Behavior Change Communication. Case study: Bangladesh.
- Topics in maternal and child health.
- WHO’s Expanded Programme on Immunization and the end of Polio.
- Health systems and modes of delivery: the US, Cuba and others as models of care.
- STIs and HIV/AIDS. Prevention, screening, treatment, vaccines, and the ethics of HIV trials and ethics.
- Refugee health and particular healthcare needs of refugees in Vermont.
- Developing a list of skills to be obtained during residency training and beyond for global health work.

At the conclusion of the course, students will demonstrate the ability to:

1. Formulate a working definition of the term global health, and its relationship to such concepts as public health, tropical medicine, and travel medicine.
2. Describe levels or stages of preventive medicine programs, give examples of these programs in the context of global health, and through experiences with case studies, describe basic aspects of such programs in terms of efficacy, cost-effectiveness, integration with other interventions, etc.
3. Demonstrate familiarity with basics of epidemiologic methods and terms, and the application of these to selected cases (e.g. developing health policy towards an intervention to reduce burden of disease in a population).
4. Define cultural competency in the context of global health and medical practice, and give examples from case studies of how cultural competency may affect the outcome of a health intervention.
5. Define the concept of the “ecological context” of health; give examples and discuss the impact on population health from cultural practices, geography and climate, environmental degradation, agricultural and nutrition practices, economic influences, and local/regional/international political factors.

6. Develop a summary analysis of organizations involved in global health activities, and describing their mission, activities, funding sources, and relationship to other organizations involved in global health activities.

7. Develop a personal plan (if applicable) for an international health student or residency rotation, to include identifying and describing: the organization with which the student will be affiliated; the history of the identified project and an analysis of the identified need; the role of the student in the project, including projects if any; and the expected outcomes for the student, the local population, and the affiliated organization.

**Format:**

1. Brief lectures by course faculty and guest speakers.
2. Case studies and student-led discussions.
   a. All course materials with the exceptions of handbooks posted on the University of Vermont COMET system.
   b. Printed articles to be distributed to students.
4. Final student presentation on a global health topic.

**Evaluation Methods:**
Participant performance relative to the Learning Objectives will be evaluated using the Advanced Integration Evaluation Form. Students will evaluate this selective course using the standardized course evaluation form.
Course Description

Goals: The purpose of the Family Medicine Underserved Rotation is to involve the student in culturally diverse and underserved health care settings providing comprehensive health care.

Students will acquire an understanding of the unique challenges of providing health care in underserved settings.

Students will participate in the management of common medical problems within ambulatory care.

Format: Students will work in clinics providing care to underserved populations for a one month period in a setting anywhere in the United States. The daily activities of the rotation will reflect both the needs of the student and the clinic. Students will work together with the department of Family Medicine to identify appropriate sites for this rotation. Arrangements with these clinical sites must be established two months before the scheduled rotation.

Evaluation Methods: The student’s performance will be evaluated by the preceptor using written forms.

The student will submit a reflective narrative (2 page minimum) within 1 week of the completion of the rotation. Students will elaborate on the population served and unique needs of the community.

Honors will be awarded through review of the submitted narrative and evaluations by the UVM Course Directors.
COURSE NO: FM1130
Title: Global Health Elective in Dhaka, Bangladesh
Faculty: Omar Khan, MD MHS FAAFP (Dept. of Family Medicine), Beth Kirkpatrick MD (Div. of Infectious Disease).

Time Commitment: 1 month
Months Offered: All months; by request only; contact 3 months ahead of intended month; request application from course directors by email (omar.khan@vtmednet.org; beth.kirkpatrick@uvm.edu)
Enrollment: 3 students/month
Visiting Students: No

Course Description

Goals: This elective is set up and supervised by the faculty of the Frymoyer Global Health Group. The goals are to provide medical students with a structured global health experience at a renowned center in a developing setting. The Bangladesh elective is conducted at one of our two partner institutions:
1) ICDDR,B (www.icddrb.org), based in Dhaka, Bangladesh with field sites throughout the country (Co-Director in Bangladesh: Prof. Alejandro Cravioto)
2) The Centre for Health Population and Development (www.iub.edu.bd/chpd) at the Independent University, Bangladesh (Co-Directors in Bangladesh: Prof. M. Omar Rahman and Dr. Rita Yusuf).

The elective is jointly administered by UVM and ICDDR,B / IUB, and it is approved for Advanced Integration credit. The elective is already set up for the participating student, with preceptors, local transportation and housing arrangements. Air travel and local funds are not provided.

Eligibility criteria include being an Advanced Integration medical student, and having approval of your advisor to participate. Selection process will involve a brief application to be approved by the Frymoyer Global Health Group. For more information please contact us at the above email addresses.

Format: For ICDDR,B elective: The student(s) will be assigned to work with a mentor at one of the divisions of the ICDDR,B. A combination of clinical experience (at the renowned cholera and tropical disease hospital) and public health/research experience will be arranged. Some individualization will be permitted based on the skills and interest of the student(s).

For CHPD/IUB elective: The student(s) will work on a public health/community health/fieldwork project in connection with the multi-country PURE study (Prospective Rural-Urban Epidemiology). IUB is the Bangladesh focal point for PURE and the student(s) will work directly with the program’s PI, Prof. Rahman. Fieldwork, local interviews, community health and public health skills will be gained.

Evaluation Methods: The UVM Advanced Integration grading form will be used. One evaluation will be completed by the on-site ICDDR,B / IUB faculty mentor, and one will be completed by the Frymoyer member at UVM whom the student will stay in touch with.

On return to UVM, a short paper will be expected, as will a brief presentation to interested students and faculty.
COURSE NO: FM1135
Title: Palliative Care
Faculty: Ursula McVeigh, MD (contact person); Allan Ramsay, MD; Barbara Segal, RN, MS; Maura McClure, RN, MSN; Robert Macauley, MD; Zail Berry, MD, Staff at Vermont Respite House and the home hospice program of the Visiting Nurse Association

Time Commitment: 1 month
Months Offered: All
Enrollment: 1 student per month
Visiting Students: Yes

Course Description

Goals: The goals of this elective are:

1. To understand how people transition from curative or restorative treatment goals to palliative care when facing a life threatening medical condition and to experience the rewards of helping people achieve comfort and dignity at the end-of-life.
2. To learn the basic principles of palliative and hospice care, including:
   a. Effective communication skills, including empathetic listening and the ability to discuss difficult and painful issues with diverse groups of people.
   b. A holistic, team approach to patients and their families, with primary concern for their psychosocial, emotional and spiritual needs.
   c. Management of symptoms such as pain, dyspnea, nausea and vomiting, constipation, diarrhea, anxiety, sleep disturbances and many other physical problems common to patients at the end of life.
3. To encourage students to reflect on their personal feelings about death and dying, and to develop an understanding of death as a natural experience. Students learn how people find opportunities for growth at the end of life, and how the experience can enrich their own personal and professional lives.

Format: Students divide their time between the inpatient palliative care service at FAHC, the Vermont Respite House in Williston, and home visits with hospice nurses. They will attend the weekly interdisciplinary team meetings of the Hospice of the Champlain Valley. Students will prepare consultations with the palliative care team at FAHC. They will also work with the Pediatric Advanced Care Team, make palliative care rounds in the MICU, and attend the Palliative Care Clinical Case conferences.

Evaluation Methods: Students are expected to participate in daily patient care and pursue outside reading (books supplied). Students also prepare four palliative care consultations during the elective, and they will prepare a presentation on a topic of their choice at the end of the month.
Course Description

Goals: The reading month allows the student an opportunity for self-directed study in an area pertinent to the student's general medical education.

Format: The student, with approval from Dr. Koutras, will select a faculty member and present a written outline of the independent study plan at the beginning of the month to report on progress. The student will submit a written summary at the end of the month.

Evaluation Methods: The faculty member will submit a written evaluation to the Student Affairs Office, which will describe the nature of the student's study project and the progress in meeting the established goals of the project.
**COURSE NO:** FM1181  
**Title:** Family Medicine Research  
**Faculty:** Charles Hulse, MD, PhD  
Department of Family Medicine  
Charles.Hulse@vtmednet.org  
(802) 656-5909  
**Time Commitment:** 1 - 2 months  
**Months Offered:** All  
**Enrollment:** 1 student per month  
**Visiting Students:** Yes

---

**Course Description**

**Goals:** The student will conduct a research project in primary care, with a goal of understanding research methodology, data analysis, and formal presentation.

**Format:** Students will develop their own project or work with faculty on an aspect of the faculty's research. Faculty will provide ongoing supervision. There will be an opportunity to submit research for presentation at a primary care research meeting.

**Evaluation Methods:** A research paper will be written. A brief 2-page outline of the proposed project is required to be submitted to the Institutional Review Board prior to the beginning of the project. A summary research paper and/or PowerPoint presentation will be written at the conclusion of the project.
Anesthesiology

THE VALUE OF EXPERIENCE IN ANESTHESIOLOGY

Anesthesiology is accurately characterized as the practice of internal medicine in the surgical and critical care arena. Experience in this discipline is very valuable for most physicians-in-training. Persons intending to practice in a primary care setting will benefit by learning airway management and intubation skills. Those skills will be there when needed in emergencies in primary care in the future. In addition, pediatricians, internists, and family medicine physicians all refer patients for surgical procedures. Understanding the techniques and impact of anesthesia on patients, both behaviorally as well as physiologically, provides a good background for optimal preparation of patients referred for surgery and anesthesia.

Persons intending to train in surgical specialties, including obstetrics and gynecology, will benefit from the broader perspective achieved during an anesthesiology training experience. Finally, anesthesiologists are ultimately clinical physiologists and pharmacologists. Perhaps more than any other area of clinical practice, anesthesiology offers an opportunity to truly understand and master the practical aspects of basic pharmacology and autonomic physiology.

CLINICAL ROTATIONS

The Department of Anesthesiology offers rotations in surgical anesthesia (including obstetrical anesthesia) and pain medicine. They are independent of one another and both last one month.

RESEARCH IN ANESTHESIOLOGY

The Department of Anesthesiology also offers a "nuts and bolts" introduction to research. In this experience, the student devotes time before the rotation to developing a clinical or library research project of sufficient substance to merit publication. The student receives guided instruction in the process of doing research and in critically reviewing the literature.

ADVISORY SERVICES

Medical students who believe they might be interested in anesthesiology as a career option are encouraged to schedule a meeting with the Department Chairman (extension 72415) for assistance. Informal discussions with any faculty member are welcome at any time.
COURSE NO: ANES1501
Title: Clinical Anesthesiology
Faculty: Joseph Fitzgerald, MD and Lydia Grondin, MD; and Mitchell Tsai, MD
Time Commitment: 1 month
Months Offered: All
Enrollment: 2 students per month
Visiting Students: Yes

-----------------------------------------------

Course Description

Goals: The objective of this course is to provide an overview of anesthesiology, including airway management, perioperative pharmacology, intraoperative physiologic evaluation, and postoperative pain management. Students may elect to spend a portion of the elective on the obstetrical analgesia/anesthesia service, as well as the chronic pain service.

Format: 1. Students will provide longitudinal perioperative care to surgical patients under the supervision of an attending anesthesiologist. This will involve preoperative patient assessments, formation of anesthetic plans, administration of general and regional anesthetics, and postoperative pain control.
2. Students will have an assigned reading list, and will attend the scheduled teaching conferences provided by the anesthesiology department.
3. Students will be given a pre-test the first week of their rotation and a closed book end of rotation exam as well.
4. Each student will have the opportunity to construct a personal plan for the month-long rotation, under the direction of an attending physician. Thus specific goals for learning can be identified and pursued.

Evaluation Methods: Student evaluation will be based upon daily contact with members of the Anesthesiology Department. Students will be asked to evaluate the rotation, as part of an ongoing effort by the department, to improve the quality of education.
COURSE NO: ANES1502
Title: Anesthesiology, MMC
Faculty: Contact/apply through Dept. of Medical Education (4wk rotation); or through Karen Breton, Dept. of Surgery (2wk rotation). Specific questions about rotation, contact James Flowerdew, M.D., Dir. of Student Education in the Dept. of Anesthesiology at (207) 662-2526 or flowej9@spectrummg.com
Time Commitment: Two and four weeks; Monday through Friday, 7am – 4pm unless prearranged with attending. Students are invited to attend residents’ lecture at 4pm daily. Anesthesiology Grand Rounds Thursday at 7am.
Months Offered: September through June
Enrollment: By arrangement
Visiting Students: Yes, if from AAMC approved University, available through MMC

Course Description

Goals: The curriculum covers the following: pharmacology and clinical use of local anesthetics, pressors, inotropes, muscle relaxants, sedatives, and analgesics; the physiology and delivery of general anesthesia, mechanical ventilation, and regional anesthesia; methods of patient monitoring (non-invasive and invasive); fluid and transfusion therapy; the intra-operative management of co-existing diseases such as hypertension, coronary artery disease, asthma, diabetes, and renal insufficiency; and aspects of anesthesia for surgical subspecialties such as vascular and neurosurgery. By the end of the month the student should be able to outline a reasonable anesthetic plan for a healthy patient undergoing general anesthesia for outpatient surgery and plan throughout the month to improve steadily his or her techniques for intravenous line placement and airway management.

Format: The student works one-on-one with an attending anesthesiologist, committed to teaching. The setting is a busy, 21 room OR that conducts 50 to 90 surgeries a day. A day-by-day outline of topics is provided as a guide for reading and discussion with the staff anesthesiologist. The staff guides the student through all phases of anesthetic care from pre-operative patient evaluation and preparation for surgery to OR management and planning for post-operative analgesia. The staff instructs the student in the techniques of intravenous line placement and airway management including mask ventilation and edotracheal intubation. When appropriate, the staff may also teach arterial and central venous cannulation.

Evaluation Methods: Performance will be evaluated using the Advanced Integration Evaluation Form.
Course Description

Goals: Conducting a clinical research project seems intimidating. Nonetheless, conducting research is simply a learned process with elements common to every project undertaken. The primary goal of this course is to introduce the student to the process and mechanics of how to ask an appropriate question, review the literature, develop a study protocol, execute it, and publish the results.

Format: Students will work with experienced research faculty in advance of the designated month to develop a research idea. This may represent a significant time commitment. The month designated for the rotation itself will be devoted to inaugurating (and often completing) the project itself. The student is expected to complete a manuscript for submission for publication as a result of this work. Faculty guidance and support as well as departmental secretarial support assist the student through the process. The student is expected to present a short verbal summary of the research at an appropriate departmental conference. Interested students should contact the course director as early as possible.

Evaluation Methods: Performance will be evaluated using the Advanced Integration Evaluation Form.
The Department of Medicine welcomes students to the Medical Service and offers a variety of clinical electives within the Advanced Integration. A solid foundation in Medicine is advantageous for all students, and the Department invites students to sample broadly from the many electives offered. Students should plan to include both inpatient and outpatient experiences in general and subspecialty internal medicine in their Advanced Integration.

Deciding on a career path is difficult without a clear understanding of the options available. The Department of Medicine believes that students should not make a career decision without first experiencing the challenges and satisfactions of caring for patients in an ambulatory setting. The Department urges students to plan an experience in ambulatory general or subspecialty internal medicine in order to gain a clearer understanding of the types of careers available within this discipline.

For students planning careers in internal medicine, the Department advises two months of Acting Internships in order to provide additional clinical experience in preparation for residency training. One of these will be the Acting Intern rotation in Inpatient General Internal Medicine mandated by the Vermont Integrated Curriculum.

The Director, Office of Education, is pleased to write a Department of Medicine letter of recommendation for any student seeking residency training. The Department recommends that students planning to request a letter complete four rotations, including an Acting Internship, on the Medical Service prior to the date the letter is needed.

We welcome the opportunity to meet with students who have any questions about the Advanced Integration offerings in Medicine. Dr. Levine may be reached through the Office of Education, 847-4959 for an informal telephone conversation or to set up an appointment to discuss your interests or your needs.
COURSE NO: MED 1000
Title: Medical Management: The Basics
Faculty: Mitchell H. Tsai, MD, MMM, Clinical Instructor, Department of Anesthesiology, UVM College of Medicine and William Cats-Baril, PhD, Professor, UVM School of Business
Time Commitment: 30-40 hours per week
Months Offered: October
Enrollment: 12-36 students
Visiting Students: No

Course Description

Goals: 1) To develop an understanding of clinical operations, process management, and quality improvement.
2) To explore concepts in organizational development, teamwork, leadership and inflection mapping.
3) To understand the basics of financial accounting and financial management.
4) To expand the concepts learned in basic statistics with managerial applications, including statistical process control.
5) To explore the nascent field of health informatics.
6) To prepare students for possible future professional responsibilities in risk management, health care advocacy, and board governance.

Format: Students will be expected to work in groups with 2-3 fellow medical students during the month. Lectures will be given by faculty members from Fletcher Allen Heath Care and the University of Vermont. Guest lecturers will be invited when possible. Curriculum will be complemented by several group activities including organizational development, team-building workshops and the jazz of leadership. Ultimately, the goal of the didactic sessions and group activities is to help the students build a solid foundation that will be applicable to their future practices or professional responsibilities.

Evaluation Methods: Attendance is mandatory. Students will be graded on the completion of individual written assignments, their participation in small group activities, and their contributions in discussion groups.

Course Materials:
A course booklet will be distributed on the first day of class. Readings will be directed by the lecturers. Students also will need to purchase required and recommending readings at the bookstore or through an on-line distributor. The reading list is subject to change.

Required readings:
1) Tribal Leadership by Dave Logan, John King, and Hallie Fischer-Wright
2) The Wisdom of the Crowds by Jamie Surweicki
3) A Force for Change by John Kotter
4) Only the Paranoid Survive by Andy Grove
5) The Management Myth: Why the Experts Keep Getting it Wrong by Matthew Stewart

Recommended readings:
1) The Social Transformation of American Medicine by Paul Starr
2) Managing by Henry Mintzberg
3) A Strategy for Sustainability by Adam Werbach
4) Blink by Malcom Gladwell
5) Egonomics by David Marcurn and Steven Smith
COURSE NO: MED1089
Title: Introduction to Clinical Research
Faculty: Harvey S. Reich, MD, FCCP, FACP Medical Director, Critical Care Medicine
Rutland Regional Medical Center
(802) 747-3851

Time Commitment: 1-2 months
Months Offered: By arrangement
Enrollment: 1 student per month
Visiting Students: Yes

Course Description

Goals: The goals of the Introduction to Clinical Research rotation at Rutland Regional Medical Center are to mentor the student in learning current research methodology applicable to clinical research. The student will work with the critical care faculty to select a clinical research project which can be completed within the time frame of the student’s rotation. The student will be guided through this process including writing a research proposal, literature review, data collection, evaluating the data, and writing an abstract to be submitted to a major national meeting and/or a local meeting as either an oral or poster presentation.

Format: The student will be in communication with the research faculty advisor to select a project prior to the rotation. This will give the student ample time to review the pertinent literature, and to begin writing her/his research proposal. The student will be expected to spend approximately half of the rotation involved in data collection, and the other half in data analysis and abstract writing for meeting submission. The rotation will have flexible hours with nights and weekends not required.

Evaluation Methods: Performance will be evaluated by the quality and enthusiasm of the student’s work using the Advanced Integration Evaluation form.
Course Description

Goals: Research in endocrinology/diabetes offers the student the opportunity to participate in a variety of ongoing research projects. Students have the opportunity to obtain hands-on experience in clinical or basic projects. They gain skills with research instrumentation, human and animal studies, experimental design, data evaluation, and scientific writing. Students electing longer periods may be allowed to define independent clinical or basic research projects leading to publication and presentation of data at scientific meetings.

Format: Students interested in this rotation either participate in ongoing research or define an independent project. Areas of study include mechanisms of insulin resistance, clinical intervention studies in obesity or diabetes, pathogenesis of type II diabetes mellitus with particular emphasis on β-cell dysfunction and insulin resistance, molecular aspects of β-cell development and growth compensation. Students participate in ongoing research and clinical seminars.

Evaluation Methods: The faculty preceptor evaluates the student's performance periodically throughout the rotation via regular and frequent personal contact.
Course Description

Goals: By the end of the first quarter of this century 20% of our population will be over 65 and will account for half of all health care expense. The enormous impact of our aging population means that all physicians should have some exposure and experience with geriatric care and issues. More than 40% of seniors will spend some time in a nursing facility. Nursing facility patients are increasingly more acutely ill, admitted after recent strokes, fractures, or surgeries, and are often managed in the facility for a variety of acute complications such as pneumonia and delirium.

The goals are:

1. To gain familiarity with the basic science and clinical variants of aging, specific geriatric syndromes, and end-of-life issues.
2. To improve history, physical diagnosis, and clinical treatment skills by providing comprehensive medical evaluations and daily acute and chronic medical care (free of the pressures and interruptions of the more intense academic teaching hospital environment).
3. To observe how care is provided in a “non-traditional” care model. In particular, this means learning to work as a member of the case management team.
4. To gain experience in the principles of geriatric rehabilitation and restorative therapy by working with physical, occupational and speech therapists.
5. To develop skill administering and interpreting the mini-mental status exam, geriatric depressions scales, and geriatric functional assessment.

Format: The elective will take place at Starr Farm Nursing Center in Burlington, a 150-bed facility with a large sub-acute care service and long-term care, where I am the medical director. Starr Farm offers a supportive environment with an interested and medically sophisticated staff, and patients and families who appreciate the involvement of trainees. Students will participate in direct patient care at least five half days each week. Weekly sessions with physical therapy, occupational therapy, speech therapy, social service, and “skin care team” will be coordinated. I will provide short talks on topics such as functional assessment, introduction to nursing homes, and geriatric therapeutics. If scheduled, the student will be encouraged to participate with me at administrative meetings such as quality improvement, infection control, ethics or others.

Evaluation Methods: Students will be evaluated on the basis of interest and development of evaluation and management skills over the course of the month; ability to become a part of the case management team; and a presentation made to staff near the end of the rotation.
**Course Description**

**Goals:**

The goals of this elective are to gain:
1. Improved skills in cardiovascular assessment and management including patient histories and physical exams.
2. Increased knowledge of selected cardiac topics including acute coronary syndromes, congestive heart failure, lipid management, etc.
3. Improved understanding of clinical cardiac problems in isolation and in the context of other surgical/medical problems.
4. Achievement of basic EKG reading and interpretation and an enhanced understanding of more advanced cardiovascular testing.

**Format:**

1. Primary assessment of inpatient cardiac consultations and presentation to attending physician.
2. Attendance at all scheduled cardiology education programs.
3. Attendance at daily inpatient cardiology teaching Rounds and coronary care unit Rounds.
4. Primary EKG reading with tutored review by cardiovascular fellow.
5. Observation of invasive and noninvasive cardiac diagnostic techniques (catheterization, angioplasty, exercise testing, echocardiography, etc.).

**Evaluation Methods:**

Qualitative collective cardiac staff assessment will be based upon observation of student performance.
COURSE NO: MED2503
Title: AI Medicine, MMC
Faculty: Kristen Sciacca, MD, Program Director
Time Commitment: 1 month
Months Offered: All
Enrollment: 3 students per month
Visiting Students: Available through MMC

Course Description

Goals: The Acting Internship at MMC is an opportunity for students to provide direct patient care under the guidance of experienced clinicians. The Acting Internship will prepare students for graduate training in clinical specialties.

During this elective, students will refine their skills in:
1. Obtaining complete medical histories.
2. Performing thorough physical examinations.
3. Carrying out invasive procedures.
4. Assembling problem lists that reflect an understanding of the pathophysiology of the medical diseases encountered.
5. Defining overall goals and problem-specific goals for each patient.
6. Formulating diagnostic and therapeutic plans consistent with the goals.
7. Incorporating an evidence-based approach into their clinical practice and their clinical decision-making.

Students will carry primary responsibility for the care of their patients and will receive guidance from their senior residents, their teaching attending, and each patient’s personal physician. Students will develop skills that they will rely upon throughout their careers, including principles of shared responsibility for patient care and methods for team learning.

NOTE: The AI in Medicine at MMC is an option for fulfilling the Required Medicine Acting Internship.

Format: Students will be an integral part of one of the two General Medicine inpatient teams at MMC. They will assume primary responsibility for their patients, and will be supervised by two senior medical residents and a teaching attending. Medical student Acting Interns will function in a role similar to that of an intern, but will have responsibility for fewer patients. Students will attend regular didactic sessions for Medicine Acting Interns, and didactic sessions with their team and with other residents. The on-call schedule is one night out of four.

Evaluation Methods: Performance will be evaluated by the teaching attending and by the supervising residents using the UVM Form for Evaluation of Clinical Competence of Acting Intern. Clinical skills with patients will be evaluated during direct observation at the bedside by the acting internship faculty and by the supervising residents using the Mini-Clinical Evaluation Exercise Form.

ACTING INTERNSHIPS AT MMC, ONCE SCHEDULED, MAY NOT BE DROPPED WITHOUT A REPLACEMENT.
COURSE NO: MED2504
Title: AI Cardiology, MMC
Faculty: Kristen Sciacca, MD, Program Director
Time Commitment: 1 month
Months Offered: All
Enrollment: 1 student per month
Visiting Students: Available through MMC

Course Description

Goals: The Acting Internship at MMC is an opportunity for students to provide direct patient care under the guidance of experienced clinicians. The Acting Internship will prepare students for graduate training in clinical specialties.

During this elective, students will refine their skills in:

1. Obtaining relevant medical histories from patients with cardiovascular disease.
2. Performing thorough physical examinations of patients with cardiovascular diseases.
3. Carrying out invasive procedures.
4. Using monitoring devices and techniques to assess the cardiac rhythm and the hemodynamic status of patients with altered cardiovascular physiology.
5. Assembling and prioritizing problem lists according to the severity and the acuity of the medical diseases encountered.
6. Defining overall goals and problem-specific goals for each patient.
7. Formulating and prioritizing diagnostic and therapeutic plans consistent with the goals and the immediacy of the problems.
8. Incorporating an evidence-based approach into their clinical practice and their clinical decision-making.

Students will carry primary responsibility for the care of their patients and will receive guidance from their senior residents, cardiology fellow, their teaching attending, and each patient’s personal physician. Students will develop skills that they will rely upon throughout their careers, including principles of shared responsibility for patient care and methods for team learning.

NOTE: The Department of Medicine recommends the Maine Medical Center Acting Internship in the fulfillment of one of the two required Acting Internship months for those considering a career in internal medicine.

Format: Students will be an integral part of the inpatient cardiology/CICU team at MMC. They will assume primary responsibility for their patients, and will be supervised by a senior medical resident, a cardiology fellow, and a teaching attending. Medical student Acting Interns will function in a role similar to that of an intern, but will have responsibility for fewer patients. Students will attend regular didactic sessions with their team and with other residents. The on-call schedule is one night in four.

Evaluation Methods: Performance is evaluated by the teaching attending, the cardiology fellow, and the supervising resident. Performance will be evaluated using the UVM Evaluation of Student Clinical Performance form.
COURSE NO: MED2506
Title: Dermatology
Faculty: Glenn Goldmann, MD, Chairman; Paul Krusinski, MD; Jamie Alpert, MD; Kathryn Schwartzzenberger, MD; Todd Holmes, MD; Melissa Pugliano-Mauro, MD; Julie Lin, MD
Time Commitment: 1 month
Months Offered: All
Enrollment: 3 students per month
Visiting Students: Yes

Course Description

Goals: Goals for this course are:
1. Efficient data collection: To learn the appropriate historical information for various dermatologic disorders.
2. Learn how to accurately describe skin lesions: Fine-tune descriptive abilities when examining the skin.
3. Learn the differential diagnosis of common dermatologic problems and have some familiarity with various rare dermatologic disorders.
4. Learn common dermatologic therapies and know the indications for the various vehicles of dermatologic therapy.
5. Learn the proper time for referral to a dermatologist.

Format: The bulk of the student's time will be spent at the Dermatology Outpatient Clinic in the Ambulatory Care Center.

Evaluation Methods: 1. Day-to-day evaluation of the student's progress will be made as each patient is discussed.
2. Evaluation of the student's special topic (lecture at Dermatology Conference).
3. The student will be given the opportunity to evaluate this elective at the end of the month.
**Course Description**

**Goals:**
A Consult Rotation at MMC is an opportunity for students to learn the principles of subspecialty consultation in the inpatient setting. The Clinical Cardiology Rotation will introduce students to the evaluation and management of patients who are hospitalized with cardiac problems or who have cardiac issues complicating their hospitalization for non-cardiac medical illnesses or surgical procedures.

During this elective, students will learn the following skills:
- 1. Evaluation of abnormal ECG.
- 2. Evaluation of cardiac ischemia, including selection of appropriate cardiac stress tests and cardiac imaging studies.
- 3. Supervision of cardiac stress testing.
- 4. Evaluation of syncope.
- 6. Assessment of operative risk, and the role of the consultant in helping to manage patients with cardiac problems through various surgeries.

Students will learn the roles and responsibilities of being a consultant to primary care physicians and to surgeons as they help guide the management of patients with cardiac problems.

**Format:**
Students will be part of the inpatient cardiology consult team at MMC, and will be supervised by a cardiology fellow and a cardiology attending. Students will evaluate patients for whom cardiology consultation is requested, formulate diagnostic and therapeutic plans to address the cardiac issues, and follow the progress of the patients they see. Findings and recommendations for diagnosis and management will be reviewed on faculty Rounds each day. Students will participate in the performance of stress tests and imaging studies. Students will also participate in the emergency treatment of patients as situations arise.

Students will attend regular tutorials and didactic sessions with their team and with other residents.

**Evaluation Methods:**
Performance will be evaluated by the cardiology attending and the cardiology fellow using UVM Evaluation of Student Clinical Performance form.
COURSE NO: MED2508
Title: Diabetes, Endocrinology and Metabolism
Faculty: R.C. Christian, MD; J.L. Leahy, MD; M.H. Nathan, MD, PhD; and J.J. Schnure, MD; R.Pratley, MD, M.P. Gilbert, DO, MPH; A. Marney, MD
Time Commitment: 1 month
Months Offered: All
Enrollment: 2 students per month
Visiting Students: Yes

Course Description

Is this for you?
The diabetes and endocrine elective is highly recommended for medical students who are considering residency training in primary care (family medicine, ob-gyn, pediatrics, and internal medicine) or surgery. A child born in the USA today has a 1 in 3 lifetime chance of developing diabetes mellitus. Over 40% of surgical inpatients experience hyperglycemia during admission and diabetes-related conditions account for 45% of adult primary care office visits. Pituitary abnormalities are incidentally detected in 20% of head imaging studies and thyroid disorders affect over 15% of adults.

Goals:
The inpatient experience teaches students to manage hyperglycemia and common endocrine emergencies in hospitalized patients. The goal of the outpatient clinic experience is for students to learn to diagnose and treat patients with diabetes and endocrine disorders as part of an integrated healthcare team that includes diabetes educators, surgeons, pathologists and radiologists.

Format:
The inpatient experience:
Medical students on the endocrine consult service are part of a team that includes a medical resident and/or endocrine fellow and attending. On daily hospital rounds students learn to manage blood sugars in medical and surgical inpatients with diabetes or hyperglycemia after surgery or during a critical illness. In addition to inpatient diabetes management, students will learn to diagnose and treat common endocrine emergencies such as diabetic ketoacidosis, hyponatremia, hypercalcemia, thyrotoxicosis and adrenal insufficiency.

The outpatient experience
The endocrine and diabetes clinics are held every afternoon at 3 Timber Lane, a short drive from the hospital (students may drive from the hospital with the attending, car is not required). Medical students will see patients with each member of the endocrine care team, which includes diabetes educators, dieticians, nurse practitioners, endocrine fellows, and bone density technician, as well as the endocrine attendings. Our students are encouraged to attend classes for patients with newly diagnosed diabetes, such as Diabetes Survival Skills and Living Well with Diabetes, as well as one-on-one sessions in which patients are taught to use insulin pumps. Medical students will see adult patients with acquired and hereditary bone diseases in the multi-disciplinary metabolic bone clinic, held in the ACC Building East Pavilion. Students may elect to see patients with Cystic Fibrosis Related Diabetes (CFRD) in a monthly clinic held in the ACC Building East Pavilion.

Didactics:
Two weekly teaching conferences are held at the Timber Lane office. Each Monday at
noon, medical students attend endocrine grand rounds, a conference that rotates weekly among 4 formats: research, case conference, diabetes conference, and journal club. Each Thursday, a didactic conference is held from 12-1, with lectures on endocrine pathophysiology. A pathology conference is held each Friday morning at the hospital, in which the thyroid biopsies and surgical pathology of the previous week are reviewed under the microscope with a pathologist.

Two monthly conferences are held at the hospital. The imaging-radiology-pathology conference, in which the imaging and surgical pathology of endocrine cases are discussed, is attended by the surgeons, pathologists and radiologists involved in the diagnosis or treatment of the patients presented. The metabolic bone conference, held Friday at noon, is a lecture series on bone diseases.

**Thyroid US:**
Medical students will learn to perform thyroid ultrasound and assist with thyroid biopsies in our procedure room. Each week they will attend a thyroid cytopathology conference, in which the biopsies of the previous week are reviewed under the microscope with a cytopathologist.

**Bone Density:**
Medical students may observe DXA scanning, and learn how to interpret DXA scans so as to guide osteoporosis diagnosis and treatment.

**Web Resources:**
The Endocrine Society ([www.endo.org](http://www.endo.org))
The Osteoporosis Center ([www.fahc.org/osteoporosis](http://www.fahc.org/osteoporosis))
The Hormone Foundation ([www.hormone.org](http://www.hormone.org))
The American Thyroid Association ([wwwthyroid.org](http://wwwthyroid.org))

**Up To Date Texts:**
The Primer on Metabolic Bone Diseases. 7th edition. On reserve at the Dana Library.

**Evaluation Methods:**
The endocrine faculty will evaluate student performance using the Advanced Integration Evaluation Form.
COURSE NO: MED2510
Title: Clinical Gastroenterology
Faculty: N. Ferrentino, MD; S. Lidofsky, MD, PhD; G. Mawe, PhD; P. Moses, MD; D. Strader, MD; J. Vecchio, MD; S. Willis, MD; R. Zubari, MD and Eric Ganguly, MD
Time Commitment: 1 - 2 months
Months Offered: All
Enrollment: Maximum of 2 students
Visiting Students: Yes

Course Description

Goals: Goals are the development of approach to the diagnosis and treatment of a variety of gastrointestinal disorders with emphasis on pathophysiology and pathogenesis of disorders involving esophagus, stomach, small intestine, large intestine, pancreas, and liver.

Format: Students will be expected to work-up patients with a variety of gastrointestinal disorders who are seen in consultation, or who are hospitalized, by members of the gastroenterology unit. The clinical experience is broadened in outpatient settings as well. The students will be responsible for a number of patients and will participate in Rounds made by the gastroenterology service including an attending physician, fellow in gastroenterology, and members of the house staff. Students will observe and may assist in a variety of gastrointestinal procedures including endoscopy and liver biopsy. They will be expected to participate in formal conferences by discussion of selected aspects of the pathogenesis, pathophysiology or clinical course of patients with gastrointestinal disorders.

Evaluation Methods: Student evaluation is based on thoroughness, efficiency, reliability, and analytical ability observed throughout the rotation. A written evaluation will be submitted at the end of the rotation.
COURSE NO: MED2511  
Title: Gastroenterology/Hepatology Research  
Faculty: N. Ferre,ntino, MD; S. Lidofsky, MD, Ph.D.; G. Mawe, Ph.D.; P. Moses, MD; D. Strader, MD; J. Vecchio, MD; S. Willis, MD; R. Zubarik, MD and Eric Ganguly, MD  
Time Commitment: 2 - 12 months  
Months Offered: All  
Enrollment: Maximum 5 students any one time  
Visiting Students: Yes

Course Description

Goals: The goals of this elective are to expose students to basic and/or clinical research in diseases of the digestive tract and liver. The elective provides opportunities in developing critical thinking with respect to health-related research and to master skills in study design, biostatistics, or state-of-the-art biological techniques. Extended participation may result in a submission of an abstract or manuscript for publication.

Format: Students may elect to participate in clinically oriented human studies or in basic laboratory studies involving cellular and molecular biology. Active areas of clinical investigation include assessment of new therapies for inflammatory bowel disease, esophageal cancer, and viral hepatitis. Areas of laboratory investigation include the biology of the enteric nervous system, regulation of biliary motility, control of adaptive responses to metabolic stress in liver cells, and the role of ion channels in regulation of liver function.

Evaluation Methods: Evaluation will be made by the preceptor on a periodic basis and will focus on independent and analytical thinking, participation in the research project, technical aptitude, and communication skills from written summaries or oral presentation.
COURSE NO: MED2512
Title: Clinical Infectious Diseases, MMC
Faculty: Division of Infectious Diseases, MMC
Time Commitment: 1 month
Months Offered: All
Enrollment: 1 student per month
Visiting Students: Available through MMC

Course Description

Goals:
A consult rotation at MMC is an opportunity for students to learn the principles of subspecialty consultation in the inpatient and outpatient settings. The Clinical Infectious Diseases Rotation will introduce students to the evaluation and management of outpatients who have infectious diseases, including outpatients with HIV, and of inpatients who have infectious diseases complicating their hospitalization for other illnesses or surgical procedures.

During this elective students will learn the following skills:
1. Evaluation of fever
2. Interpretation of gram stains
3. Interpretation of laboratory data relevant to patients with infectious diseases
4. Selection of antibiotic therapy
5. Monitoring of antibiotic levels and efficacy of antibiotic therapy

Students will learn the roles and responsibilities of being a consultant to primary care physicians and to surgeons as they help guide the management of patients with infectious diseases.

Format:
Students will be part of the inpatient infectious disease consult team at MMC and the outpatient HIV/AIDS clinic, and will be supervised by an infectious diseases fellow and an infectious diseases attending. Students will evaluate patients for whom infectious disease consultation is requested, formulate diagnostic and therapeutic plans to address the infectious issues, and follow the progress of the patients they see. Findings and recommendations for diagnosis and management of inpatients will be reviewed on faculty Rounds each day. Students will participate in the collection of specialized specimens and the performance of gram staining.

Students will attend regular tutorials and didactic sessions with their team and with other residents.

Evaluation Methods:
Performance will be evaluated by the infectious diseases attending and the infectious diseases fellow using the UVM Evaluation of Student Clinical Performance form.
**COURSE NO:** MED2513  
**Title:** Hematology/Medical Oncology  
**Faculty:** Steven Ades, MD; Richard Branda, MD; Susan Burdette-Radoux, MD; Mary Cushman, MD; Barbara Grant, MD; Marc Greenblatt, MD; Steven Grunberg, MD; Hyman Muss, MD; George Philips, MD; Julian Sprague, MD; Marie Wood, MD; and Neil Zakai, MD  
**Time Commitment:** 1 month  
**Months Offered:** All  
**Enrollment:** Maximum of 1 student per month  
**Visiting Students:** Yes

-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

**Course Description**

**Goals:** Students will:
1. Understand the principles of contemporary treatment of cancer, including hematologic malignancies.
2. Learn to evaluate and treat disorders of red cells, white cells, platelets and hemostasis.
3. Understand the principles of clinical research as applied to hematology and medical oncology.

**Format:** A clinically oriented experience based primarily in the outpatient clinic, with participation in ward Rounds on inpatients and consultations. Attendance at selected multidisciplinary teaching conferences is required. There will be an opportunity to review peripheral blood and bone marrow morphology.

**Evaluation Methods:** Performance will be evaluated using the Advanced Integration Evaluation Form.
COURSE NO: MED2514
Title: Clinical Infectious Diseases
Faculty: K. Alston, MD; C. Grace, MD; C. Huston, MD; B. Kirkpatrick, MD; L. Polish, MD; and M. Ramundo, MD, and K. Pierce, MD
Time Commitment: 1 month
Months Offered: All
Enrollment: Maximum of 2 students per month
Visiting Students: No

Course Description

Goals: This course will introduce the student to the evaluation and management of patients with infectious diseases and febrile illnesses.

Format: Clinical evaluation (including history, physical and laboratory), differential diagnosis, and decision-making will be emphasized. Didactic lectures and weekly ID conferences will supplement the patient consultations. The student will work closely with the ID attending during patient work-ups, physical diagnosis, and interpretation of gram stains, other laboratory data and selection of antibiotic therapy. Participation in the outpatient HIV/AIDS clinic will supplement the inpatient consultation experience.

Evaluation Methods: Evaluation will be based on ability of the student to evaluate consultation patients, formulate diagnostic and therapeutic plans, and follow-up of these plans.
COURSE NO: MED2516
Title: AI Medicine
Faculty: Mark A. Levine, MD
Time Commitment: 1 month
Months Offered: All
Enrollment: 4 students per month
Visiting Students: No

.................................................................

Course Description

Goals: This required rotation will provide a direct patient care experience under the guidance of experienced clinicians, and to prepare students for graduate training in clinical specialties. During the elective, students will refine their skills in:
1. Obtaining thorough and reliable histories.
2. Performing thorough and reliable physical examinations.
3. Preparing complete problem lists.
4. Defining reasonable overall goals and problem-specific goals.
5. Formulating diagnostic and therapeutic plans consistent with the goals.
6. Carrying out invasive procedures.
7. Prescribing medications.
8. Counseling patients and families.
9. Assisting patients with the logistics of hospital- and community-based services.
10. Developing and refining an evidence-based approach to clinical practice.

Students will carry primary responsibility for the care of their patients, and will maintain ongoing contact with each patient's personal physician.

Format: Similar to internship experience, except medical student Acting Interns will have responsibility for fewer patients. Acting Interns will be part of one of the four General Medicine Inpatient Teams at FAHC.

The on-call schedule is one night out of four. A night float service is in place.

Students will attend weekly didactic sessions emphasizing acquisition of intern-level skills in evaluating common hospital problems as well as weekly discussion sessions that emphasize evidence-based medicine and its role in solving relevant clinical problems.

Evaluation Methods: Acting Interns will be evaluated by a combination of: competency-based evaluation submitted by supervising resident and teaching attending, performance on the Medicine Shelf Exam, and an OSCE.

*ACTING INTERNSHIPS AT FAHC MAY NOT BE DROPPED WITHOUT A REPLACEMENT.*
COURSE NO: MED2517
Title: AI on MICU Service, FAHC
Faculty: Michael Young, MD
Time Commitment: 1 month
Months Offered: All
Enrollment: 2 students per month. Satisfactory completion of an inpatient AI in any specialty is required as a prerequisite.
Visiting Students: On an individual basis, and only if slots are not filled by University of Vermont students first.

----------------------------------------

Course Description

Goals: This elective will provide a direct patient care experience under the guidance of experienced clinicians. During the elective, students will learn:
1. To obtain relevant histories from critically ill patients.
2. To perform thorough and reliable physical examinations of patients in the ICU setting.
3. To define appropriate short-term and long-term goals for patient management.
4. To formulate and triage management plans according to the importance of immediacy of problems.
5. To develop technical skills in carrying out medical procedures used in the intensive care unit.
6. To use monitoring techniques and support equipment (including mechanical ventilators) for the care of the critically ill patients.
7. Developing and refining an evidence-based approach to clinical practice.

Students will carry primary responsibility for the care of their patients.

Format: Similar to internship experience, except medical student Acting Interns will have responsibility for fewer patients. Acting Interns will be part of the medical intensive care unit team at FAHC.

The on-call schedule is one night out of four.

Students will attend weekly didactic sessions emphasizing acquisition of intern-level skills in evaluating common hospital problems as well as weekly discussion sessions that emphasize evidence-based medicine and its role in solving relevant clinical problems.

Evaluation Methods: Performance will be evaluated by the teaching attending and the supervising resident and assess the six ACGME competency areas.

*ACTING INTERNSHIPS AT FAHC MAY NOT BE DROPPED WITHOUT A REPLACEMENT.*
Course Description

Goals: This elective will provide a direct patient care experience under the guidance of experienced clinicians. During the elective, students will learn:

1. To obtain relevant histories from patients with acute and chronic cardiovascular diseases.
2. To perform thorough and reliable physical examinations of patients with symptoms of acute and chronic cardiac disease.
3. To define appropriate short-term and long-term goals for patient management.
4. To formulate and triage management plans according to the importance and immediacy of problems.
5. To develop technical skills in carrying out medical procedures used to assess hemodynamic status.
6. To use monitoring techniques and support equipment for the care of patients with altered cardiovascular physiology.
7. To develop an understanding of appropriate algorithms for risk stratification and cost-effectiveness for patients with cardiac disease.
8. Developing and refining an evidence-based approach to clinical practice.

Students will carry primary responsibility for the care of their patients.

Format: Similar to internship experience, except medical student Acting Interns will have responsibility for fewer patients. Acting Interns will be part of one of the two cardiology/coronary care unit teams at FAHC.

The on-call schedule is one night out of four.

Students will attend weekly didactic sessions emphasizing acquisition of intern-level skills in evaluating common hospital problems as well as weekly discussion sessions that emphasize evidence-based medicine and its role in solving relevant clinical problems.

Evaluation Methods: Performance will be evaluated by the teaching attending and the supervising resident and assess the six ACGME competency areas.

*ACTING INTERNSHIPS AT FAHC MAY NOT BE DROPPED WITHOUT A REPLACEMENT.
COURSE NO: MED2519  
Title: Clinical Nephrology  
Faculty: F. John Gennari, MD; Virginia Hood, MBBS, MPH; Jeffrey Rimmer, MD; Alan Segal, MD; Richard Solomon, MD; and Wolfgang Weise, MD  
Time Commitment: 1 month  
Months Offered: All  
Enrollment: 2 students  
Visiting Students: Yes

Course Description

Goals: Goals for the student are:
1. To learn the approach to the evaluation and management of common renal problems including acute kidney injury, fluid, electrolyte, and acid-base disorders, and hypertension.
2. To gain an appreciation for the problems in the long-term care of patients with chronic kidney disease and end-stage renal disease.
3. To learn the role of the consultant.

Format: Activities:
1. Daily teaching Rounds with nephrology attending.
2. Twice weekly clinical conferences.
3. Once monthly Pathology Conference.

Student Responsibilities:
1. Initial evaluation of new consults, review with resident or nephrology fellow, and presentation to nephrology attending.
2. Daily follow-up of consults, with progress notes as indicated.
3. One weekend/month call with attending.
4. Read and report current literature relating to patients.

Evaluation Methods: Evaluation will be by the nephrology attending, with emphasis on thoroughness, clarity, and analytic skills demonstrated in written work-ups and oral presentations, evidence of independent learning, and care shown to patients.
Course Description

Goals: Students will understand the role of the General Internist in managing chronic disease and complex medical patients. They will gain exposure and experience in general medicine consultation, including the following:

1. Preoperative consultation and risk assessment.
2. Concurrent medical management of the surgical patient for postoperative care and for chronic problems such as diabetes, hypertension, COPD, CHF and dementia.
3. Consultation for acute medical problems such as delirium, syncope, hypertension, dyspnea, fever; evaluation of laboratory abnormalities such as hyponatremia, hypercalcemia, anemia, abnormal liver function tests.

Students will also understand the role of the consultant with emphasis on understanding the question that is being asked, obtaining a relevant database, making appropriate assessment and communication of clear, concise, and specific recommendations.

Students will also act as members of Fletcher Allen Health Care’s rapid response team and assist with triage and management of critically ill inpatients.

Students will learn to formulate clinical questions and make effective use of the medical literature in answering them.

Format: Students will function as integral team members along with the senior resident and attending. Students will see patients on their own, present them on teaching Rounds where emphasis will be on education, with confirmation of findings and bedside teaching done on walk Rounds daily. Students will then follow individual patients daily. Faculty will directly provide supervision. Students are required to be present in the hospital from 8 am to 5 pm, Monday through Friday and will be expected to present a special topic of their choice at Rounds at the end of the rotation.

Evaluation Methods: Performance will be evaluated by the attending physician and assess the six ACGME competency areas.
**Course Description**

**Goals:**
This required rotation will provide a direct patient care experience under the guidance of experienced clinicians, and prepare students for graduate training in clinical specialties. During the elective, students will refine their skills in:

1. Obtaining thorough and reliable histories.
2. Performing thorough and reliable physical examinations.
3. Defining reasonable overall goals and problem-specific goals.
4. Preparing complete problem lists.
5. Formulating diagnostic and therapeutic plans consistent with the goals.
6. Understanding the principles of contemporary treatment of cancer, including hematologic malignancies.
7. Learning evaluation and treatment of disorders of red cells, white cells, platelets and hemostasis.
8. Understanding the principles of clinical research as applied to Hematology and Medical Oncology.

Students will carry primary responsibility for the care of their patients, and will maintain ongoing contact with each patient's personal physician.

**Format:**
Similar to internship experience, except medical student Acting Interns will have responsibility for fewer patients. Acting Interns will be part of the Hematology/Oncology Inpatient Team at FAHC. Admissions are accepted by the team on a daily basis, but there is no overnight call.

**Evaluation Methods:**
Acting Interns will be evaluated by a combination of: competency-based evaluation submitted by supervising resident and teaching attending, performance on the Medicine Shelf Exam, and an OSCE.

*ACTING INTERNSHIPS AT FAHC MAY NOT BE DROPPED WITHOUT A REPLACEMENT.*
COURSE NO: MED2525
Title: Clinical Pulmonary Medicine Elective
Faculty: Gilman Allen, MD; Jason H.T. Bates, PhD; Gerald S. Davis, MD; Anne E. Dixon, MD; Susan Dunning, MD; Charles G. Irvin, PhD; David A. Kaminsky, MD; Theodore W. Marcy, MD; Polly E. Parsons, MD; Matthew Poynter, PhD; Benjamin Suratt, MD; Daniel J. Weiss, MD; Laurie Whittaker, MD; Michael P. Young, MD; Yolanda Mageto, MD; Renee Stapleton, MD and Lennart Lundblad

Time Commitment: 1 month
Months Offered: All
Enrollment: 1 student per month
Visiting Students: Yes

---------------------------------------------------------------------------------------------------------

Course Description

Goals: 1. The student should know how to evaluate a respiratory disease problem by:
   a. Eliciting a directed and detailed respiratory disease history.
   b. Carrying out a detailed respiratory system physical examination.
   c. Requesting and interpreting appropriate radiologic, physiologic, serologic and other specialized clinical data.

   2. The student should learn the role of biopsy, bronchoscopy, physiologic tests, and other special studies in the management of lung disease patients.

   3. The student should become familiar with the location and use of the major published information sources in Pulmonary Medicine.

Format: The student sees patients in the hospital or ambulatory care unit on whom pulmonary consultation is requested, discusses them with pulmonary fellows and attending staff, and writes a report subject to their review. The student attends Rounds daily on consultation patients and those admitted to pulmonary medicine. The student observes and assists with bronchoscopy, pulmonary function studies, lung biopsies, and other specialized tests. The student will participate in weekly pulmonary medicine conferences.

Evaluation Methods: The student will be evaluated by:
1. Quality of patient data collection, analysis and orderly presentation.
2. Extent and depth of independent study and reading.
3. Direct observation of bedside skills.
4. Organization of time and effort in relation to identified patient care tasks.
Course Description

Goals: At the end of the one month rotation the student will be familiar with:
1. Musculoskeletal physical exam and data collection.
2. Natural history and treatment of rheumatic disease
   a. Rheumatoid arthritis
   b. Osteoarthritis
   c. Systemic lupus erythematosus, scleroderma, and other "collagen-vascular diseases"
   d. Ankylosing spondylitis
   e. Crystal-induced arthritis
   f. Regional disorders of joints and related structures
3. Clinical immunology related to the rheumatic diseases
4. Joint aspiration and synovial fluid analysis
5. Interpretation of bone and joint x-rays.

Format: The student will attend outpatient clinics, in-patient consultation rounds, department of medicine conferences, rheumatology division conferences, and lectures during the rotation. Attending supervision will be provided by the full-time faculty and fellow.

Students will read the Primer on the Rheumatic Diseases and those chapters in the standard rheumatology texts (McCarty and/or Kelley; Hoppenfeld for physical exam) relevant to their patient experiences. In-depth journal review and report of selected, pertinent topics will be part of the training experience. Students may also review the teaching slide collection, stored PowerPoint lectures and/or taped lectures.

Evaluation Methods: Evaluation will be based on data collection, physical exam skills, analysis, orderly presentation and an end of the month didactic presented by the student. The extent of independent study and reading will be evaluated.
COURSE NO: MED2530  
Title: AI Critical Care Medicine, MMC  
Faculty: Thomas E. Van der Kloot, MD  
Time Commitment: 1 month  
Months Offered: All  
Enrollment: 2 students  
Visiting Students: No

Course Description

Goals: Management of the critically ill patient requires a multi-faceted approach. Our 34-bed special care unit will provide students with exposure to medical, surgical, and cardiac surgical patients. Emphasis will be placed on "hands-on" experience as much as possible, under the supervision of a senior resident or critical care fellow. Core topics covered in daily lectures include arterial and mixed venous gas analysis, pulmonary artery catheter insertion and interpretation, airway management, mechanical ventilation, nutrition, acid-base problems, early recognition and treatment of infection and sepsis syndrome, intracranial pressure monitoring and treatment, GI bleeding, acute renal failure, ARDS, shock, x-ray interpretation, outcome prediction, and ethics of intensive care.

Format: Weekdays 7:00 AM to 5:30 PM (unless on-call)  
Weekends off (unless on-call)  
Call schedule is structured by the student, but call is recommended every fourth night with resident or fellow.

Evaluation Methods: Performance will be evaluated by the staff using the UVM Evaluation of Clinical Performance form.
Course Description

Goals:
- In depth exposure to ethical dilemmas in clinical practice
- Practical training in the method and basis of clinical ethics consultation

Format:
- Attendance at weekly case conference/peer review
- Participation in all clinical ethics consults
- Independent reading, suited to student’s interest
- Research opportunities

Evaluation Methods:
- Written analysis/recommendations of real and hypothetical ethics cases
- Frequent discussions with faculty regarding ethical topics and readings
Course Description

Goals:

**Participation in this elective will:**

1. Provide the student the opportunity to experience caring for patients with chronic diseases and in whom alleviation of suffering and provision of comfort are the primary goals.
2. Allow the student to become familiar with the basic concepts of the delivery of palliative medicine in both the inpatient and community settings.
3. Give student experience in recognizing and responding to ethical dilemmas in EOL care including issues of comfort, consent, prolonging life, withholding treatment, euthanasia, and allocation of resources—Including legal issues concerning advance care planning, advance directives, and decision making at EOL.
4. Allow the student the opportunity to learn about different cultural traditions and cultural assessment with emphasis on patient/family beliefs about roles, death and dying, afterlife, and bereavement.

Format:
The medical student will spend one month working with the Palliative Care Consult team. He/she will be responsible for researching different practices in palliative care and updating him/herself on recent trends and the current standard of care in this field. The medical student will round on active patients and see new consults with the palliative care attending and nurse practitioner. The student will also attend the monthly ethics committee conference, and will keep a journal of reflections on their experience with their patients during the month, and will deliver a 30 minute lecture on a current palliative medicine topic of their choosing.

Evaluation Methods:

**Formal evaluation will include:**

1. Completion of the requirements listed above
2. Presentation of a topic in Palliative Care
3. Completion of elective evaluation and faculty mentor evaluation
4. Short narrative of selected reading
5. Completion of journaling reflections.
COURSE NO: MED2550  
Title: Diabetes Management Elective  
Faculty: R.C. Christian, MD; J.L. Leahy, MD; M.H. Nathan, MD, PhD; and J.J. Schnure, MD; R. Pratley, MD; M.P.Gilbert, DO, MPH; A. Marney, MD  
Time Commitment: 2 weeks  
Months Offered: All  
Enrollment: 2 students per month  
Visiting Students: Yes

Course Description: The Diabetes Management elective is highly recommended for medical students who are considering residencies in primary care (family medicine, ob-gyn, internal medicine) or surgery. A child born in the USA today has a 1 in 3 lifetime chance of developing diabetes mellitus, and over 40% of our hospital patients have diabetes or experience hyperglycemia during admission.

Goals: This 2 week elective occurs in both the inpatient and outpatient setting. In the hospital setting, students learn how to manage hyperglycemia and diabetic emergencies, such as diabetic ketoacidosis and non-ketotic hyperosmolar coma, in medical, surgical and obstetrical inpatients. The goal of the outpatient clinic experience is for students to learn to diagnose, treat and educate patients with diabetes as part of an integrated healthcare team that also includes diabetes educators, registered dieticians, and nurse practitioners.

Format: The inpatient experience: Medical students will round each weekday morning with the diabetes management team, which includes a medical resident and/or endocrine fellow, nurse practitioner and attending. Students will learn to manage blood sugars in medical and surgical inpatients who have diabetes or hyperglycemia complicating surgery or critical illness.

The outpatient experience: Students will spend the afternoon at The Vermont Regional Diabetes Center, 3 Timber Lane, South Burlington, located 2 miles from the hospital (students may drive from the hospital with the attending, car is not required). Medical students will see patients with each member of the endocrine care team, which includes diabetes educators, nurse practitioners, and our endocrine fellows. On the first Friday morning of the month, students will have the option of seeing patients with Cystic Fibrosis Related Diabetes (CFRD) in a monthly clinic held in the ACC Building East Pavilion.

Didactics: Two weekly teaching conferences are held at the Timber Lane clinic. Each Monday at noon, medical students attend endocrine grand rounds, a conference that rotates weekly among 4 formats: research, case conference, diabetes conference, and journal club. Each Thursday, a didactic conference is held from 12-1, with lectures on endocrine pathophysiology.

Classes: Students are encouraged to attend weekly classes for patients with newly diagnosed diabetes, such as Diabetes Survival Skills, or the semi-monthly Living Well with Diabetes, as well as individual sessions led by our diabetes educators in which patients are taught to use glucose meters, sensors or insulin pumps.
Course Director: Rose Christian, MD

Web Resources: The Endocrine Society (www.endo.org)
The Hormone Foundation (www.hormone.org)
American Diabetes Association (www.ada.org)
Up To Date


Evaluation Methods: The endocrine faculty will evaluate student performance using the Advanced Integration Evaluation Form.
COURSE NO: MED2576
Title: Applied Medical Info/Telemedicine Research
Faculty: Terry Rabinowitz, MD
Time Commitment: 1-2 months
Months Offered: All months
Enrollment: Maximum of 3 students at any one time
Visiting Students: With approval only

-------------------------------

Course Description

Goals: The goals of this elective are:
1. To facilitate understanding of the need to evaluate the use of computers and/or telemedicine in the clinical care process.
2. To introduce the student to research in the academic medical center, including the organization of a grant proposal and the requirements of an IRB (Institutional Research Board).
3. To provide the student with experience in the design, organization and implementation of a research project to evaluate a medical informatics and/or telemedicine program.
4. To write a paper for publication or presentation at a medical informatics or telemedicine conference (two-month selective only).

Format: At the beginning of the elective, the student will meet with the course director(s) and a faculty mentor, if applicable, to develop specific educational goals for the Selective and define the parameters of the research. The student will either develop a research project or participate in on-going research with the Fletcher Allen and UVM telemedicine program. At least once a week the student will meet with the assigned faculty member for review of the research and progress towards meeting the educational objectives. The final week of the two-month Selective will be devoted to writing a research paper for presentation or publication.

Evaluation Methods: Evaluation will be based on the educational objectives for the Selective, and the paper for the two-month Selective.
COURSE NO: MED1086
Title: Maine Outpatient Internal Medicine Elective
Faculty: Board Certified Internist

CONTACT: Catharine M. Cadigan, MD, FACP
Department of Medicine

Time Commitment: 1 month
Months Offered: January, February, March, April, May, October, November, December
Enrollment: 1 student per month
Visiting Students: Available through MMC

Course Description

Goals: This rotation through the Maine Practice Network is designed to acquaint and familiarize the medical student with primary care in the ambulatory setting. The sites utilized for this experience are 25 rural practices throughout Maine under the supervision of a board-certified internist as a preceptor. This is an excellent opportunity to experience the practice of general internal medicine away from subspecialty influences. The student is provided with the opportunity to experience both the art and the practice of medicine in a community or rural setting. Room and board is provided for the student. For more information about Maine Practice network sites, visit www.mmc.org/mpn.

Evaluation Methods: After review with the student, the preceptor will submit a written evaluation to the Department of Medicine at Maine Medical Center constituting the final grade for the course. Each student is responsible for a written evaluation of the preceptorship experience. Scholarship and professional behavior will be assessed in conjunction with the clinical rotation evaluation from the preceptor.
Course Description

Goals: A consult rotation at MMC is an opportunity for students to learn the principles of subspecialty consultation in the inpatient setting. The Clinical Nephrology rotation will introduce students to the evaluation and management of patients who are hospitalized with renal problems or who have renal issues complicating their hospitalization for other medical illnesses or surgical procedures.

During this elective, students will learn the following skills:
1. Evaluation of acute renal failure.
2. Evaluation of acid-base disorders.
4. Performance of routine and microscopic urine analysis.

Students will learn the roles and responsibilities of being a consultant to primary care physicians and to surgeons as they help guide the management of patients with renal impairment.

Format: Students will be part of the inpatient Neurology Consult team at MMC, and will be supervised by a nephrology fellow and a nephrology attending. Students will evaluate patients for whom nephrology consultation is requested, formulate diagnostic and therapeutic plans to address the renal issues, and follow the progress of the patients they see. Findings and recommendations for diagnosis and management will be reviewed on faculty rounds each day. Students will participate in the performance of urine testing and procedures to measure renal function.

Students will attend regular tutorials and didactic sessions with their team and with other residents.

Evaluation Methods: Performance is evaluated by the nephrology attending and the nephrology fellow using the UVM Evaluation of Student Clinical Performance form.
COURSE NO: MED2578  
Title: AI Nephrology, MMC  
Faculty: Kristen Sciacca MD, Program Director  
Time Commitment: 1 month  
Months Offered: All  
Enrollment: 1 student per month  
Visiting Students: Available through MMC

Course Description

Goals: The Acting Internship at MMC is an opportunity for students to provide direct patient care under the guidance of experienced clinicians. The Acting Internship will prepare students for graduate training in clinical specialties.

During this elective, student will refine their skills in:

1. Obtaining complete medical histories.
2. Performing thorough physical examinations.
3. Evaluating common renal problems including acute renal failure, fluid and electrolyte imbalances, acid-base disorders, and hypertension.
4. Assembling problem lists that reflect an understanding of the pathophysiology of the medical diseases encountered.
5. Understanding the modalities and techniques used in the long-term treatment of patients with end-stage renal disease.
6. Defining overall goals and problem-specific goals for each patient.
7. Formulating diagnostic and therapeutic plans consistent with the goals.
8. Incorporating an evidence-based approach into their clinical practice and their clinical decision-making.

Students will carry primary responsibility for the care of their patients and will receive guidance from their senior resident, their teaching attending, and each patient’s personal physician. Students will develop skills that they will rely upon throughout their careers, including principles of shared responsibility for patient care and methods for team learning.

NOTE: The AI in Nephrology at MMC is an option for fulfilling the Required Medicine Acting Internship.

Format: Students will be an integral part of the Renal inpatient team at MMC. They will assume primary responsibility for their patients, and will be supervised by a senior medical resident and a teaching attending. Medical student Acting Interns will function in a role similar to that of an intern, but will have responsibility for fewer patients. Students will attend regular didactic sessions for Medicine Acting Interns, and didactic sessions with their team and other residents. The on-call schedule is one night out of four.

Evaluation Methods: Performance will be evaluated by the teaching attending and by the supervising residents using the UVM Form for Evaluation of Clinical Competence of Acting Intern. Clinical skills with patients will be evaluated during direct observation at the bedside by the acting internship faculty and by the supervising residents using the Mini-Clinical Evaluation Exercise Form.

ACTING INTERNSHIPS AT MMC, ONCE SCHEDULED, MAY NOT BE DROPPED WITHOUT A REPLACEMENT.
**Course Description**

**Goals:** A consult rotation at MMC is an opportunity for students to learn the principles of subspecialty consultation in the inpatient setting. The Clinical Pulmonary Medicine rotation will introduce students to the evaluation and management of patients who are hospitalized with chest diseases or who have pulmonary issues complicating their hospitalization for other medical illnesses or surgical procedures.

During this elective, students will learn the following skills:
1. Evaluation of acute respiratory symptoms.
3. Interpretation of pulmonary function testing.
4. Interpretation of arterial blood gas samples.
5. Interpretation of imaging studies of the chest, including chest x-rays and chest CT scans.
6. Assessment of operative risk, and the role of the consultant in helping to manage patients with pulmonary problems through various surgeries.

Students will learn the roles and responsibilities of being a consultant to primary care physicians and to surgeons as they help guide the management of patients with chest diseases.

**Format:** Students will be part of the inpatient pulmonary consult team at MMC, and will be supervised by a pulmonary fellow and a pulmonary attending. Students will evaluate patients for whom pulmonary consultation is requested, formulate diagnostic and therapeutic plans to address the pulmonary issues, and follow the progress of the patients they see. Findings and recommendations for diagnosis and management will be reviewed on faculty rounds each day. Students will participate in the performance of pulmonary function tests. Students will also participate in the emergency treatment of patients as situations arise.

**Evaluation Methods:** Performance is evaluated by the pulmonary attending using the standard UVM Evaluation of Student Clinical Performance form.
COURSE NO: MED2581  
Title: Medical Consultation in Psychiatry  
Faculty: Alan Rubin, MD  
Time Commitment: 2 weeks or 1 month  
Months Offered: All months except May  
Enrollment: 1 student  
Visiting Students: Yes  

----------------------------------------------------------------------------------

**Course Description**

**Goals:** Learn to manage the common medical comorbidities of the inpatient psychiatric patient. Practice advanced communication skills in difficult patients.

**Format:** Mornings are spent on the inpatient floors, seeing patients and attending rounds. Afternoons are spent in teaching sessions or in the library.

**Evaluation Methods:** Direct observation and feedback. Written assignment.
Neurology

The Need for Experience in Neurology

Medical students often comment that Neurology is the most intimidating discipline because of the complexity of neuro-anatomy and neurophysiology. The Neurology Clerkship offers a structured, brief introduction to clinical neurology but many students, particularly those going into the clinical neurosciences, will benefit from additional exposure to the field. The Advanced Integration Rotations in neurology will allow students to expand upon their previous experience by allowing them to observe general adult or pediatric neurology with attending neurologists, by exposure to neurology subspecialties or by participating in clinical research. Students who plan a career in Neurology are advised to pursue an AI in Neurology in addition to a second elective in Neurology.

Rotations in Neurology

The Department of Neurology offers rotations in clinical neurology, which includes Pediatric Neurology, experiences with neurologists in private community practice in Vermont and Maine, and clinical neurophysiology or research opportunities.

Advisors

Students interested in neurology as a career should choose a Neurology faculty member as an advisor after discussion with the Chairman (extension 74588).
Course Description

Goals: Students will become familiar with the techniques of neurological history and examination as applied to inpatients and/or outpatients with a variety of neurological diseases and neurological complications of other diseases. They will learn about neurodiagnostic procedures and management of disease of the nervous system.

Format: Rotations have been developed for UVM medical students to be attached to neurologists affiliated with the Department of Neurology in New York, Vermont, and Maine. These rotations may be available in Rutland, Berlin, Saranac Lake, Bangor, and Portland, subject to the availability of the local neurologists at those sites. It is necessary to discuss your preferences with Dr Timothy Fries or your Neuroscience Major Program advisor when selecting and identifying the location of this rotation. This rotation will be treated as an extramural rotation and approval by the Associate Dean for Student Affairs is mandatory. The student may potentially reside at the affiliated institution, and will be attached to one or more neurologists during the rotation. There will be experience of inpatient care, consultations, and office practice.

Evaluation Methods: Evaluation will be made by the faculty on the basis of daily contact. Students will generally be asked to provide simple interpretations and assessments of the tests toward the end of the rotation.
COURSE NO: NEUR3501
Title: AI Neurology – Neurology Ward Service
Faculty: Neurology Attending Staff
Time Commitment: 1 month minimum
Months Offered: All. Due to the somewhat limited availability for this inpatient AI rotation, in selecting students for this rotation, we will give priority to those pursuing careers in neurology, psychiatry, rehabilitation medicine, neurosurgery, and ophthalmology.
Enrollment: By arrangement
Visiting Students: Yes

Course Description

Goals: To expand on examination and localization skills learned in the Neurology Clerkship. Students will learn about the clinical approach to common inpatient neurological disorders, develop the clinical neurological skills to manage patients with stroke, epilepsy, neuromuscular disorders, as well as general neurology, and develop diagnostic expertise in neuroimaging.

Format: The rotation includes inpatient care of neurology ward patients with stroke and other neurological disorders. Also required is daily attendance at ward and consultation rounds. The student is an acting intern and participates in night and weekend overnight call. There is continuous supervision by the neurology residents and by attending teaching faculty who round daily. Attendance is required at weekly brain cutting session (neuropathology), neurosciences (neurology and neurosurgery) Grand Rounds, neuroradiology rounds, professor rounds, clinical case seminars for medical students, and neuroscience conferences for the residents. In most instances, outpatient experience in the clinics will be built into the rotation.

Video Case Presentation: The student will be asked to present a clinical case using a brief videotaped vignette. Over the course of this hour long presentation, there will be a discussion of the pertinent components of the history and exam, including a discussion of the likely site of lesion and the differential diagnosis. Finally, diagnostic and treatment options will be elaborated. A literature review should support the case discussion.

Evaluation Methods: The ward service attending will meet with each student individually after two weeks for a preliminary evaluation and a final review will be given at the conclusion of the rotation. Dr Fries will also meet periodically with the student to discuss his or her progress. The student’s grade will be based on the quality of patient work ups, presentations, participation, diagnosis and management discussion at daily rounds and weekly professors and patient review rounds. Feedback from the attendings and residents will be sought and the student will be given a written examination. Clinical feedback, assessment of the student presentation and the Neurology Shelf Examination score will determine the grade.
COURSE NO: NEUR3503
Title: Clinical Neurophysiology
Faculty: H. Attarian, MD, Assistant Professor; E. Dulaney, MD, Assistant Professor; T. Fries, MD, Associate Professor; J. McSherry, MD, Associate Professor; and K. Nagle, MD, Assistant Professor, Course Director
Time Commitment: 1 month
Months Offered: All
Enrollment: 1 student per month
Visiting Students: No

Course Description

Goals: The goals of this elective are to introduce students to various techniques and interpretations of electrodiagnostic procedures used in neurology, ophthalmology and orthopaedic and neurologic surgery. These include central neurophysiology tests such as electroencephalography (EEG), visual evoked responses (VER), brain stem auditory evoked responses (BAER), somato-sensory evoked responses (SSER), polysomnography, brain mapping, and newer computer methods. Peripheral electrophysiology studies include electromyography (EMG), nerve conduction times (NCT), single fiber electromyography (SFEMG), motor unit counting techniques, autonomic testing, quantitative sensory threshold testing, and intra-operative EMG.

Additionally, students will be involved in PSG/MSLT reading and sleep patient evaluations. Students will attend and assist in procedures, receive instruction in basic principles, and in daily interpretation sessions.

PREREQUISITE: Prior to enrollment, the student must meet with and have permission of Dr. Timothy Fries.

Evaluation Methods: Performance will be evaluated in Reading Rounds with the Faculty, interpretation and generation of a formal written report on at least three types of neurophysiologic tests.
COURSE NO: NEUR3504
Title: Pediatric Neurology, In & Outpatient
Faculty: Peter Bingham, MD, Associate Professor of Neurology & Pediatrics
         E. Louisa Kalsner, MD, Assistant Professor of Neurology & Pediatrics
Time Commitment: 1 month minimum
Months Offered: All
Enrollment: By arrangement
Visiting Students: Yes

Course Description

Goals: The principles and skills underlying the recognition and management of neurologic diseases that a general medical practitioner is most likely to encounter in practice will be taught. Informal lectures and discussions will introduce the range of neurologic diseases of infants and children, including developmental delay, learning problems, autism, epilepsy, headache, and neurogenetic diseases. The student will gain experience with interview and examination techniques for children with neurologic conditions, and will learn how to perform a comprehensive neurological exam on an infant. At various points during the clerkship, the student will be observed obtaining a history and performing the neurological exam on a patient.

The elective is designed to allow students to focus on an area within pediatric neurology that is of particular interest to them. It also affords the opportunity to hone history-taking skills, speaking skills, to do a critical review of the literature and to become more proficient in using informatics and the literature. The student will make at least one oral presentation which is expected to be 20-40 minutes in length. Format of the project could consist of one of the following:

Case presentation. This may be a case that you have encountered during the rotation, during another rotation or it may be a case seen by another student or resident. Cite relevant references in discussing case. If relevant, present visual documentation such as video footage of the exam, MRI scans, EEG tracing, pathology slides, etc.

Literature review of a topic. The topic will generally be a disease entity or a clinical presentation but it could also be a test abnormality (e.g. causes of basal ganglion calcification).

Clinical Algorithm. In this format a diagnostic or therapeutic algorithm will be devised. Consideration should be given to the cost and risks of all intervention points in the decision tree.

Format: The elective in Pediatric Neurology will be a mixed inpatient and outpatient experience of 4 weeks. Students will spend time participating in clinics, inpatient consultation, and projects/electives. Students will observe/participate in morning rounds and clinics. Elective/project time will be spent on a subject mutually selected by the student and faculty preceptor. The elective and project time is expected to culminate in either a written or an oral presentation by the student.

Outpatient Clinic: Will include general child neurology cases. The student is expected to work up and present one new patient every 1/2 day clinic. The students will observe other patients and will be graded on questions that they present during the clinic.

Independent: 1. Work on a project due at the end of the rotation in the form of a written or oral report. The project should typically consist of a literature review of a topic depending on the student’s interests, but other formats could be considered and developed in conjunction with the preceptor. 2. Reading on cases seen in out- or in-patient settings.
Evaluation Methods: The students will be evaluated based on: 1. Clinical performance as judged by the faculty preceptor as well as input from residents and fellows; emphasis will be placed on the ability to interview children and parents and on the ability to deliver a clear, concise and thorough oral presentation of a patient's history and examination, 2. The quality of their project/presentation, and 3. Questions during lectures and clinical experiences.
COURSE NO: NEUR3505
Title: Neuroscience Research (Psychiatry and/or Neurology)
Faculty: To be selected on the basis of interest
Time Commitment: At least 1 month
Months Offered: All
Enrollment: Flexible
Visiting Students: Yes

Course Description

Goals: The goal is to provide the student with the opportunity to engage in a clinical or laboratory research project of his/her choice or to participate in an ongoing project with a faculty member. Projects must be arranged specifically with a faculty member after discussion with Dr. Waterman (Department of Psychiatry) or Dr. Hamill (Department of Neurology). There is a range of scholarly activities in the two departments.

Format: To be arranged. In most instances, the student will be asked to give a formal presentation of their research work at the end of the rotation.

Evaluation Methods: Performance will be evaluated on the basis of the interest, originality, and productivity demonstrated by the student.
COURSE NO: NEUR3507
Title: Cognitive/Linguistic Children’s Disorders
Faculty: Blanche R. Podhajski, PhD, President
         Stern Center for Language and Learning
         135 Allen Brook Lane, Williston, VT
Time Commitment: 1 month
Months Offered: All
Enrollment: 2 students per month
Visiting Students: No

Course Description

Goals: This elective will introduce students to a variety of developmental, communicative, and learning disorders, primarily in children. Those disorders, which can be manifested by normal, neurologically handicapped, and learning impaired individuals, consist of specific learning disabilities, dyslexia, childhood aphasia, speech and language disorders, autism spectrum disorders, attentional deficit disorders, and adaptive behavior problems.

Students will be provided with a theoretical and conceptual background in child development and language/learning disabilities.

Students will become familiar with a variety of remedial and management procedures prescribed for academic disorders, attentional and activity disorders, and speech and language handicaps.

Format: Students receive a brief didactic orientation designed to:
1. Acquaint them with the characteristics of various exceptional handicapping conditions.
2. Introduce them to methods and instrumentation utilized in educational and neuropsychological diagnostic procedures.
3. Provide an overview of related intervention procedures for various learning and communicative disorders.

Students then proceed through an Observation Rotation where they observe and participate, where appropriate, in diagnostics, remediation, and conference and counseling sessions.

Evaluation Methods: Performance will be evaluated on the basis of objective measures and faculty/student interaction.
Psychiatry

The Department of Psychiatry offers electives on several of its clinical services at both Fletcher Allen Health Care and Maine Medical Center. Psychiatric illnesses are among the most common, and among the most impairing, in all of medicine. It is, therefore, important for all students planning careers in clinical disciplines to become familiar with the diagnosis and management of several of these disorders. Students anticipating careers in psychiatry should consider taking at least one of these offerings, but should also plan elective experiences in neurology, medicine, pediatrics, and medical and/or pediatric subspecialties. Students who wish to design clinical experiences different from those listed here should discuss such possibilities with Dr. Waterman or Dr. Ladd. In addition to clinical electives, research experiences in several areas of psychiatry and neuroscience can be arranged for interested students.
COURSE NO: MDPS3550
Title: AI Inpatient Psychiatry
Faculty: Shepardson 3: Arthur Warwick, MD & Richard Bernstein, MD
Shepardson 6: Isabel Norian, MD & Judith Lewis, MD
Covering physicians: Isabelle Desjardins, MD and Suzanne Kennedy, MD
Time Commitment: 1 month
Months Offered: All; July and August by arrangement ONLY
Enrollment: 2 students per month (1 student per floor per month)
Visiting Students: Yes

Course Description

Goals: The goal is to provide the student with supervised patient care responsibility on a general hospital psychiatric inpatient service. The Acting Intern will develop a basic level of competence in the assessment and acute management of a wide variety of patients with psychiatric illness.

Shepardson 3 unlocked unit has 12 beds and patients are admitted primarily for mood and anxiety disorders, chronic pain, personality disorders and substance abuse. Shepardson 6 has 16 beds and treats a wider spectrum of patients including those of acute psychosis, mania, and behavioral disturbances associated with dementia.

Format: The Acting Intern will be an integral member of the inpatient treatment team and will work directly with the inpatient unit's attending psychiatrists, as well as other members of the multi-disciplinary staff. They will have primary responsibility for at least three inpatients at a time. They will also take one night call with the resident up to four times during the month. The AI will participate in didactics and case conferences that are part of the education of the Psychiatry residents.

Evaluation Methods: Performance will be evaluated using the Advanced Integration Evaluation Form. The Acting Intern's competence will be assessed at the mid-point and end of the rotation by the attending psychiatrists.
COURSE NO: MDPS3551
Title: Consultation Psychiatry
Faculty: Brian Erickson, MD; Evan Eyler, MD and Terry Rabinowitz, MD
Time Commitment: 1 month
Months Offered: All
Enrollment: 1 student per month
Visiting Students: Yes

Course Description

Goals: The goal is to learn about the presentation of psychiatric problems, symptoms, and disorders in patients hospitalized on non-psychiatric services, and to learn to perform psychiatric evaluations and recommend interventions with such patients.

Format: The student will be an integral part of the Psychiatric Consultation Service (PCS) team and will be assigned patients to evaluate and follow during their hospital stays. The student will round each day with the PCS team and will work with the director and assistant director of the service, as well as with the house officer(s), junior medical students, and others assigned to the service.

Evaluation Methods: Performance will be evaluated using the Advanced Integration Evaluation Form. Evaluation will be based upon the quality of the student's interviewing and diagnostic skills, oral presentations, written consultations, team participation, and any additional projects s/he negotiates with the faculty.
COURSE NO: MDPS3554
Title: Outpatient Psychiatry
Faculty: James Jacobson & members of outpatient faculty
Time Commitment: 1 month
Months Offered: All by Arrangement
Enrollment: Maximum of 1 student per month
Visiting Students: Yes

Course Description

Goals: The goal is to provide the student with a variety of experiences in outpatient psychiatry, depending upon the particular interests of the student. Areas in which students may participate include psychopharmacology, child and adolescent psychiatry, geriatric psychiatry, memory disorders, cognitive behavioral psychotherapy, methadone treatment, partial hospital treatment, and pain evaluation and management.

Format: The student, together with the course director, will design a schedule for the month that includes experiences in those areas of outpatient psychiatry that are of particular interest to him or her, and to gain experience in the assessment and management of patients who are treated in the outpatient setting. During a typical outpatient psychiatry month medical students attend the residents psychotherapy seminars on Mondays, the Mood and Anxiety Disorders Clinic one or two afternoons each week, participate in the Psychopharmacology Clinic and Rounds on Tuesday afternoons, and participate in 2 mornings a week (generally on Tuesday and Thursday mornings) at Seneca, the partial hospital/day program where students observe and participate in group cognitive behavioral therapy. Wednesdays are usually spent in the Pediatric Psychiatry Clinic participating in the evaluation of new and ongoing patients. Friday includes attendance of Grand Rounds in the morning, and participation in the Geriatric Clinic in the afternoon. A review of literature on a selected topic and presentation of that review on one of the outpatient services is expected of each student.

Evaluation Methods: Performance will be evaluated using the Advanced Integration Evaluation Form. The student will be evaluated on the basis of his or her initiative and professionalism, and on the knowledge and skills s/he is able to acquire.
COURSE NO: MDPS3556
Title: AI Inpatient Psychiatry, MMC
Faculty: William Brennan, MD; John Campbell, MD; Jonathan Morris, MD and Daniel Price, MD
Time Commitment: 1 to 3 months
Months Offered: September - June
Enrollment: 1 student per month
Visiting Students: Available through MMC

Course Description

Goals: This experience will provide the student with a more advanced understanding of both assessment and treatment planning for psychiatric patients, as well as a sense of responsibility for the care of patients. In addition to learning about individual psychopathology, the medical student will gain an understanding of inpatient psychiatry and the application of the therapeutic community to the treatment of psychiatric inpatients.

The MMC inpatient unit is largely populated by patients with a combination of medical and psychiatric illness, and by patients with dementia. While the importance of psychodynamic issues is recognized, treatment is weighted toward the “medicine model”.

Dr. Brennan’s inpatient unit at Spring Harbor Hospital offers a more typical general psychiatry experience, with a generally younger patient population relatively free of comorbid medical illness.

Format: Acting Interns will work under the direct supervision of an attending psychiatrist. They will have primary responsibility for at least two inpatients at a time. This includes responsibility for admission, diagnosis, and treatment planning. Acting Interns will work in conjunction with other treatment staff including nursing staff, occupational therapy, and social work. With appropriate supervision, the Acting Intern will evaluate family dynamics relevant to the patient's hospitalization. Finally, the Acting Intern will participate in didactics and case conferences that are part of the education of the psychiatry house staff.

The patient population at Spring Harbor Hospital reflects the full spectrum of acute psychiatric illness in an inpatient setting. There are both voluntary and involuntary patients. The Attending staff are all members of the MMC Faculty, and MMC psychiatry residents often work side by side with the AI.

Evaluation Methods: The Acting Intern's clinical work will be evaluated in an ongoing fashion. At the end of the rotation written evaluations are submitted by the attending psychiatrists supervising the Acting Intern.

ACTING INTERNSHIPS AT MMC, ONCE SCHEDULED, MAY NOT BE DROPPED WITHOUT A REPLACEMENT.
COURSE NO:  MDPS3557
Title:  Child Psychiatry, MMC
Faculty:  Sandra Fritsch, MD; Andrew Hinkens, MD; Sandi Kazura, MD; Douglas Robbins, MD; and Matthew Siegel, MD
Time Commitment:  1 to 2 months
Months Offered:  September - June
Enrollment:  1 student per month
Visiting Students:  Available through MMC

--------------------------------------------------------------------------------------

Course Description

Goals:  Students will gain a better understanding of, and proficiency in, the evaluation and mental status examination of the child psychiatric patient. Students will also gain experience and understanding in the evaluation of the family.

Format:  Students have supervised clinical experiences in child psychiatry. Students participate with a team consisting of a psychiatric resident and psychiatric social worker. All evaluations are supervised by one of the attending child psychiatrists. Evaluations include individual assessment of the child, family evaluation, and history gathering from the school and other community agencies. The student also participates in pediatric consultations performed in the Department of Pediatrics at Maine Medical Center. Students are encouraged to attend a broad array of seminars and case conferences available through the Division of Child Psychiatry and the Department of Psychiatry.

Evaluation Methods:  The student's clinical skills will be evaluated in an ongoing fashion. Supervisors will submit written evaluations at the end of the rotation.
COURSE NO: MDPS3558
Title: Emergency & Consult Psychiatry, MMC
Faculty: John Campbell, MD and James Wolak, MD
Time Commitment: 1 to 2 months
Months Offered: September - June
Enrollment: 1 student per month
Visiting Students: Available through MMC

Course Description

Goals: In addition to enhancing their skills in psychiatric diagnosis and mental status examination, the student will gain a better understanding of the importance of the doctor-patient relationship, of patient-family relationships, and of patient-staff relationships. The student will gain a first-hand understanding of the role of the psychiatrist in the setting of the general hospital, while enhancing their appreciation for the interplay between medical and psychiatric diagnoses.

Format: Students work directly with consultation psychiatrists. A wide variety of patients are seen under direct supervision of the attending psychiatrist. Patients may be seen both in the setting of the Emergency Room and on medical/surgical inpatient services. Students attend departmental case conferences and Grand Rounds.

Evaluation Methods: The student's clinical skills will be evaluated in ongoing fashion and at the end of the elective by the attending psychiatrists with whom they have worked.
COURSE NO: MDPS3559
Title: Clinical Assessment in a Multicultural Environment, MMC
Faculty: Jonathan E. Morris, MD, MPH
Time Commitment: 1 month
Months Offered: March
Enrollment: Up to 4 trainees. Permission of the Course Director is required
Visiting Students: Available through MMC

Course Description

Goals: Enhancing patient interviewing and assessment skills in the context of clinical consultation in a multicultural setting.

Format: A specific interest in psychiatry is not required for this elective. Trainees will be expected to interview and subsequently discuss multiple patients while under close supervision by the course director in a mental health center located in the U.S. Territory of Guam in the western Pacific. Trainees will be expected to develop a specific topic, and will have access to the comprehensive library collections of the University of Guam and the Micronesian Area Research Center to facilitate their research. After two weeks on the island, trainees will have the opportunity to travel on their own within the Pacific Rim region for one week. Then, the trainees will return to Maine Medical Center in Portland, Maine for the remainder of the month, during which time they will complete their research project(s).

Evaluation Methods: Evaluation will be based on direct observation of the trainees’ clinical work, assessment of the trainees’ participation in the various activities comprising the experience, and review of the trainees’ completed projects by the course director.
**Course Description**

**Goals:**
The primary goal is to gain exposure to child and adolescent mental health issues in multiple practice settings, including primary care.

**Format:**
The student will be involved in various types of outpatient contact, including emergency appointments, community public sector appointments, scheduled new evaluations and follow-ups, a resident-based clinic, and outpatient consultation to medically ill patients.

The outpatient visits will include the family based approach developed at the Vermont Center for Children Youth and Families. The student will participate in consultations to the inpatient pediatric medical service at The Vermont Children’s Hospital. There will be pediatric outpatient site visit case review consultations to pediatricians and family medicine physicians. The student may also participate in state-of-the-art telepsychiatry evaluations and office hours with remote Vermont sites. The student will also gain exposure to hospital diversion/residential diagnostic programs, substance abuse group treatment, and a therapeutic school setting. There will be a trip to a daycare to observe early development.

The student will also join our child psychiatry fellows for their seminars, case conference, and may participate in other child psychiatry didactics intended for senior medical students or adult psychiatry residents.

**Evaluation Methods:**
Performance will be evaluated using the Advanced Integration Evaluation Form. The student will be evaluated on the basis of her/his initiative and professionalism, and on the knowledge and skills she/he is able to acquire.
Course Description

Goals: The student will learn about, and examine critically, philosophical topics in psychiatry. Such topics may include the theoretical underpinnings of diagnostic classification systems, the history and validity of the distinction between “mental” and “physical” illnesses, the scientific and philosophical status of the concepts of free will and personal responsibility and the “mad vs. bad” controversy, coercion and involuntary treatment of the mentally ill, philosophy of mind and the mind-body problem, and/or other topics of interest to the student.

Format: The textbook for the course is Fulford, Thornton & Graham, Oxford Textbook of Philosophy and Psychiatry, access to which is required. Based on readings from the textbook and from primary and other sources, students will produce weekly five-page papers on topics they select from within the broad categories of a) philosophy of science, b) philosophy of mind, and c) ethics and values. Students will meet with the instructor at least weekly to discuss the concepts and controversies raised in the readings and in the papers they produced over the preceding week. Students wishing to enroll must discuss their interest in doing so with the instructor at least a month prior to proposed enrollment, and preferably sooner, since it will not be offered every month.

Evaluation Methods: The student’s evaluation will be based on the quality of his or her critical appraisal of the topics chosen. The Advanced Integration form for Evaluation of Student Research Performance will be used.
Obstetrics and Gynecology

The Department of Obstetrics and Gynecology offers a number of Advanced Integration Rotations which will enable students with an interest in OB/GYN to explore those interests. These rotations allow a student to experience specific areas of the specialty and provide the faculty with an opportunity to know the student better. We recommend that a student interested in postgraduate OB/GYN training take a minimum of one Acting Internship in Obstetrics and Gynecology.

The Department is willing to provide guidance in the choice of postgraduate training programs and letter of recommendation as appropriate. Students seriously interested in a career in OB/GYN should make their preferences known to Dr. Mark Phillippe, Chairman of the Department of Obstetrics and Gynecology.

The following rotations are offered:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Description</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>OBGY4503</td>
<td>Acting Internship in General Obstetrics</td>
<td>1 month</td>
</tr>
<tr>
<td>OBGY4504</td>
<td>Acting Internship in Gynecologic Oncology</td>
<td>1 month</td>
</tr>
<tr>
<td>OBGY4505</td>
<td>Reproductive Endocrinology</td>
<td>1 month</td>
</tr>
<tr>
<td>OBGY4506</td>
<td>Acting Internship in Maternal-Fetal Medicine</td>
<td>1 month</td>
</tr>
</tbody>
</table>
COURSE NO: OBGY1092
Title: Ambulatory Gynecology in Rural Vermont
Faculty: Cate Nicholas, Ed D, MS-PA
Time Commitment: 1 month
Months Offered: All but November and December
Enrollment: 1 student per month
Visiting Students: No

Course Description

Goals: During this one month rotation, the medical student will work with Planned Parenthood preceptors in rural Vermont sites. Goals are to:
1. understand reproductive health care needs of girls and women who live in rural Vermont by providing direct patient care under the supervision of Planned Parenthood Preceptor.
2. increase clinical knowledge and educational – counseling skills in the area of reproductive health with an emphasis on
   a. prevention/well woman care
   b. screening tests( cervical cancer, breast and colon cancer)
   c. risk reduction (sexually transmitted diseases, risk of unintended pregnancy, sexual coercion, smoking, weight reduction, etc)
   d. contraception options
   e. preconception
3. increases clinical skills in the area of breast exam, pelvic and bimanual exam, office lab tests and follow up.
4. increase clinical reasoning in areas of reproductive health and disease.

Format: Student will be assigned to rural site. Preceptor and student will agree on work schedule. Student will work with preceptor in the provision of direct patient care.

Student will indicate skills areas they are interested in developing or improving in the areas of
1. communication and interpersonal skills
2. physical exam skills
3. clinical reasoning
4. documentation
5. oral presentation
6. professionalism
7. clinical knowledge.

Based on those goals, the director of month rotation (Cate Nicholas, Ed D, MS,PA and the student will select experiences and readings to develop an individualized learning plan. At the two week mark, the preceptor and the student will review those goals and assess progress.

Evaluation Methods: At the end of the month, the student will meet with director of rotation and do a self assessment and have an assessment done by the preceptor based on the learning plan designed at the onset of the month rotation.
COURSE NO: OBGY1093
Title: Reproductive Health Rotation
Faculty: Cate Nicholas, Ed D, MS-PA
Time Commitment: 1 month
Months Offered: All but November and December
Enrollment: 1 student per month
Visiting Students: No

Course Description

Goals: The goals are to:
1. understand reproductive health care needs of girls and women who live in Vermont by providing direct patient care under the supervision of Planned Parenthood Preceptor.
2. increase clinical knowledge and educational – counseling skills in the area of reproductive health with an emphasis on
   a. prevention/well woman care
   b. screening tests (cervical cancer, breast and colon cancer)
   c. risk reduction (sexually transmitted diseases, risk of unintended pregnancy, sexual coercion, smoking, weight reduction, etc)
   d. contraception options
   e. preconception
3. increases clinical skills in the area of breast exam, pelvic and bimanual exam, office lab tests and follow up.
4. increase clinical reasoning in areas of reproductive health and disease.
5. increase understanding of abortion services
6. increase awareness of the impact of public policy on the health and well being of women of Vermont

Format: During this one month rotation, the medical student will work with Planned Parenthood preceptor.

Student will indicate skills areas they are interested in developing or improving in the areas of
1. communication and interpersonal skills
2. physical exam skills
3. clinical reasoning
4. documentation
5. oral presentation
6. professionalism
7. clinical knowledge.

Based on those goals, the director of month rotation (Cate Nicholas, Ed D, MS,PA and the student will select experiences and readings to develop an individualized learning plan. At the two week mark, the preceptor and the student will review those goals and assess progress.

Evaluation Methods: At the end of the month, the student will meet with director of rotation and do a self assessment and have an assessment done by the preceptor based on the learning plan designed at the onset of the month rotation.
COURSE NO: OBGY109
Title: Lactation Management
Faculty: Audrey Naylor MD DrPH pediatrician and executive director of Wellstart International, WHO, UNICEF; Anya Koutras MD IBCLC family doctor & lactation specialist
Coordinator - Patrice Demarco RN IBCLC FAHC lactation consultant
Time Commitment: 2 weeks or 1 month
Months Offered: All by arrangement
Enrollment: By arrangement
Visiting Students: No

Course Description

Goals: Elective is an introduction to breastfeeding as a medical topic. It will provide an individualized self study experience that addresses practical issues of breastfeeding. Students will be expected to:
- Understand Anatomy and Physiology associated with breastfeeding
- Understand feeding behaviors
- Develop an understanding of the scope and magnitude of issues related to breastfeeding management
- Become skillful in helping moms and their infants breastfeed while training alongside skilled practitioners.
- Gain experience on lactation assessment, management and counseling.

Format: Student will complete a series of video-/ web-/ text-based modules Students will have several opportunities to practice hands on learning (Dr. Koutras office, Shepardson 5-maternity floor, NICU, midwives lactation clinic, WIC & home visits). The learner will meet with the preceptor weekly to review content of modules, participate in discussion sessions and review progress on projects.
Attend the monthly lactation Journal Club on Shepardson 5.

Students participating for four weeks can either:
- Complete a scholarly project
- Write a paper (7-10 pages) on a preapproved topic in lactation
- Give a 15-20 minutes oral presentation

Evaluation Methods: Student will complete a series of video-/ web-/ text-based modules Students will have several opportunities to practice hands on learning (Dr. Koutras office, Shepardson 5-maternity floor, NICU, midwives lactation clinic, WIC & home visits). The learner will meet with the preceptor weekly to review content of modules, participate in discussion sessions and review progress on projects. Attend the monthly lactation Journal Club on Shepardson 5 Students participating for four weeks can either:
- Complete a scholarly project
- Write a paper (7-10 pages) on a preapproved topic in lactation
- Give a 15-20 minutes oral presentation
COURSE NO: OBGY4503
Title: AI General Obstetrics
Faculty: Elisabeth Wegner, MD
Time Commitment: 1 month
Months Offered: March 2010 – February 2011
Enrollment: 1 student per month
Visiting Students: Available if not requested by UVM student 3 months in advance

Course Description

Goals: The goals of this Acting Internship are:
1. To develop skills and gain knowledge in managing labors and deliveries of women with term pregnancies.
2. To strengthen skills in triage, teamwork, and teaching.
3. Other specific goals as identified by the student.

Format: The student will manage obstetric patients admitted to the Birthing Center by working as a night float under the supervision of the resident and attending staff. The student will work 5 nights a week, and 2 Saturdays during the month.

Each student participating in the General Acting Internship is expected to contact Dr. Wegner at least two weeks before beginning the rotation so that schedules can be formalized and goals identified. This rotation has proven useful in career decision when considering OB/GYN as a specialty. It has also been helpful in improving obstetrical decision-making skills for all students participating.

Evaluation Methods: Clinical performance will be reviewed by attending physicians and nurse-midwives, residents, and nurses. The student will also complete a self-assessment of attitudes and teamwork skills.

ACTING INTERNSHIPS AT FAHC, ONCE SCHEDULED, MAY NOT BE DROPPED WITHOUT A REPLACEMENT.
COURSE NO: OBGY-4504  
Title: AI Gynecologic Oncology  
Faculty: Cheung Wong, MD  
Time Commitment: 1 month  
Months Offered: March 2010 – February 2011  
Enrollment: 1 student per month  
Visiting Students: Available if not requested by UVM student 3 months in advance

Course Description

Goals: This Acting Internship will allow the student to spend one month dealing in-depth with the entire spectrum of problems seen and cared for by the gynecologic oncology service.

Format: Students will attend and participate in gynecology Rounds, all tumor service operations, tumor clinic, tumor conferences, private consultations, and office sessions and outreach conferences. The student is expected to follow patients before and after surgery, including overnight GYN call responsibilities twice a week.

Evaluation Methods: The student will work closely at all times with the gynecologic oncology staff. The clinical performance as well as the knowledge gained will be evaluated in an ongoing fashion. Support staff and residents will evaluate the student. A written paper or oral presentation reviewing a clinical question or problem will be required for honors.

ACTING INTERNSHIPS AT FAHC, ONCE SCHEDULED, MAY NOT BE DROPPED WITHOUT A REPLACEMENT.
COURSE NO: OBGY4505
Title: Reproductive Endocrinology
Faculty: John Brumsted, MD; Peter Casson, MD; Julia V. Johnson, MD; Christine Murray, MD; and Daniel H. Riddick, MD, PhD

Time Commitment: 1 month
Months Offered: March 2010 – February 2011
Enrollment: 1 student per month
Visiting Students: Yes, from LCME schools ONLY
Available if not requested by UVM student 3 months in advance

---

Course Description

Goals: The goals of this course are:
1. To familiarize the student with the clinical aspects of basic human reproductive physiology and endocrinology.
2. To assist the student in developing skills related to the detection of ovulation, the evaluation of disorders of ovulation, management of normal and abnormal early pregnancy.
3. To help the student develop a clinical awareness of the psychosocial concomitants of reproductive endocrine disorders and reproductive failure.

Format: Four half days weekly will be devoted entirely to evaluation of new and follow-up patients on the reproductive-endocrine-infertility service. Approximately two new outpatient evaluations per week will be included in this experience. Patients seen would be those being followed for infertility of a variety of causes, amenorrhea, menstrual disorders, recurrent abortions, and abnormalities of the sexual development.

There will be three conferences weekly, one devoted to presentation of clinical problems, one devoted to basic reproductive-infertility service, and one journal club or research conference.

Students will become familiar with basic relevant surgical procedures. This would be expected to include approximately 5 hysterosalpingograms per week, 5 laparoscopies per week, and approximately 1 major gynecologic surgical case per week.

This schedule allows generous free time during which the student will be required to develop a short presentation of his/her own related to a relevant area of a particular interest.

Evaluation Methods: The student will be evaluated according to standard criteria for clinical activities as well as for learning and investigative skills.
COURSE NO: OBGY4506
Title: AI Maternal-Fetal Medicine
Faculty: Ira M. Bernstein, MD; Eleanor L. Capeless, MD; Peter Cherouny, MD; Cathleen Harris, MD; David Jones, MD; Marjorie C. Meyer, MD; and Mark Phillippe, MD
Time Commitment: 1 month
Months Offered: March 2010 – February 2011
Enrollment: 1 student per month
Visiting Students: Available if not requested by UVM student 3 months in advance

Course Description

Goals: The goals of this course are:
1. To familiarize the student with the normal physiologic changes that occur during pregnancy.
2. To allow the student to gain experience in the management of medical problems (diabetes, hypertension, etc.) during gestation.
3. To introduce the student to basic clinical genetics and teratology.

Format: Students will attend and participate in the four half-day weekly outpatient clinics (antenatal diabetic clinic and high risk clinic) as well as daily interpretation of obstetrical ultrasound and fetal stress tests. Student will also be expected to participate in the management of in-house patients and maternal-fetal transports to Fletcher Allen Health Care. The student will have ongoing responsibility for outpatient diabetic management as well as selected hospitalized patients. The student is expected to attend and participate in the weekly Maternal-fetal Medicine Conferences as well as the combined OB/Pediatric Conference. There will be night call responsibility for MFM patients in labor. The student will develop a short presentation or paper related to a relevant area of particular interest.

Evaluation Methods: The student will be evaluated according to the standard criteria for clinical activities as well as for learning and investigative skills.

ACTING INTERNSHIPS AT FAHC, ONCE SCHEDULED, MAY NOT BE DROPPED WITHOUT A REPLACEMENT.
**COURSE NO:** OBGY-4510  
**Title:** AI Gynecologic Oncology, MMC  
**Faculty:** Christopher Darus, MD; Laurie Small, MD; Hector Tarraza, MD; and Jason LaChance, MD  
**Time Commitment:** 1 month  
**Months Offered:** January through December  
**Enrollment:** 1 student per month  
**Visiting Students:** Available through MMC

*Course Description*

**Goals:** This Acting Internship will allow the student to spend one month dealing in-depth with the entire spectrum of problems seen and cared for by the gynecologic oncology service.

**Format:** Acting Interns will attend and participate in all aspects of gynecologic oncology service, including inpatient rounds, Tumor Conference, office consultations and Colposcopy Clinic. The student is able to participate in the majority of surgical cases, and expected to follow patients before and after surgery. Also, mentorship of a research project is possible and encouraged. One Saturday and one Sunday rounding call is required.

**Evaluation Methods:** The student will work closely at all times with the gynecologic oncology staff and senior residents in the Department of OB/Gyn. The clinical performance as well as the knowledge gained will be evaluated in an ongoing fashion. Attendings will evaluate the student.

Applications are obtained from Maine Medical Center’s Medical Education Office.

**ACTING INTERNSHIPS AT MMC, ONCE SCHEDULED, MAY NOT BE DROPPED WITHOUT A REPLACEMENT.**
Course Description

Goals: The goals of this Acting Internship are:
1. To allow the student to have an individualized experience in maternal-fetal medicine.
2. To gain understanding of management of maternal medical and fetal complications with pregnancy.
3. To appreciate basics of research methodology.

Format: The student will participate in all aspects of high-risk obstetrics. Inpatient experience will include antepartum service, labor and delivery, and post partum care. The outpatient experience will be oriented to ultrasound, prenatal diagnosis, genetic counseling, and prenatal care of complicated pregnancies. Attendance at the weekly high-risk conference and clinic is expected. During the rotation, the student will complete and present an appropriate research project under the mentorship of a faculty member.

Evaluation Methods: The student will be evaluated according to standard criteria for clinical activities, and on the completed research project.

ACTING INTERNSHIPS AT MMC, ONCE SCHEDULED, MAY NOT BE DROPPED WITHOUT A REPLACEMENT.
Students interested in a career in pediatrics are encouraged to obtain a broad background in medicine. An acting internship in pediatrics is encouraged. An ambulatory pediatric experience and a neonatology rotation would also be useful. Non-pediatric electives such as emergency room, radiology, and general medicine would provide good balance.
Course Description

Goals:
During this elective the student will:
1. Become familiar with developmental diagnosis within an interdisciplinary team format.
2. Learn about early intervention resources and community collaboration.
3. Become more experienced in providing family centered care.

Format:
1. Regular participation in child development clinics.
2. Individual tutoring by developmental pediatricians.

First Day:
Contact Stephen Contompasis, MD at stephen.contompasis@uvm.edu before beginning the elective to schedule the time and meeting place for the first day.

Evaluation Methods:
Evaluation will be based on seminar procedures.
COURSE NO: PED1093
Title: Pediatric Subspecialty, MMC
Faculty: Attending Staff, coordinated through the Office of the Chief of Pediatrics at MMC
Time Commitment: 1 month
Months Offered: All
Enrollment: 1 student per specialty
Visiting Students: Available through MMC

Course Description

Goals: The Divisions of Cardiology, Child Abuse, Infectious Disease, Endocrinology, Gastroenterology/Nutrition, Hematology/Oncology, Nephrology, Neurology, Pulmonary and Genetics/Dysmorphology offer subspecialty experience to students. The Department may be contacted at 207-662-2353 for goals/format/evaluation methods for the specific division.

Format: Students will spend one month with the subspecialist(s) acquiring a knowledge base in that area. Patients will be seen in the outpatient setting (private office or clinics) as well as the inpatient setting (NICU, ICU, or the general pediatric unit). More specific information can be obtained via the Pediatric office for each subspecialty.

Evaluation Methods: Same rating system as for other Advanced Integration rotations.
COURSE NO: PED5501  
Title: AI Pediatrics, FAHC  
Site: Vermont Children’s Hospital  
Faculty: L.R. First, MD; W.V. Raszka, MD; and Pediatrics Faculty  
Time Commitment: 1 month  
Months Offered: By permission of Clerkship Coordinator or Residency Coordinator.  
Enrollment: Add/Drop forms require the Residency Coordinator’s signature  
Visiting Students: Yes, from US/Canadian LCME approved medical schools ONLY

------------------------------------------------------------------------------------------------------

Course Description

Goals: This Acting Internship will give the student a practical experience in a ward setting with increasing responsibility for the day-to-day care of hospitalized children.

Format: The Acting Intern will function in the role of a PL-1 with a reduced patient load under the guidance of the attending, senior resident, and other residents. Students will be assigned to a care team consisting of a PL-2 resident, PL-1 residents, and 4-6 pediatric clerkship students. The Acting Intern will be expected to evaluate ill children seen in the Emergency Department, work up patients admitted to the pediatric service, and perform routine diagnostic procedures. Additional responsibilities include managing hospitalized pediatric patients, arranging diagnostic and therapeutic interventions, communicating the patient’s progress with the attending and resident teams, and facilitating clerkship students’ learning. Night call is approximately every fourth night.

First Day: Contact the Residency Coordinator at 847-3544 before beginning this rotation to schedule a time and meeting place for the first day.

Evaluation Methods: Performance will be evaluated by the pediatric attendings, senior resident, and other resident members of the health care team, using the Advanced Integration Evaluation Form.

ACTING INTERNSHIPS AT FAHC, ONCE SCHEDULED, MAY NOT BE DROPPED WITHOUT A REPLACEMENT, AND PERMISSION FROM THE DEPARTMENT.
Course Description

Goals: This Acting Internship will familiarize the student with problems encountered in delivery of intensive care to premature and sick newborn infants.

Format: Students will function as Acting Interns in the neonatal intensive care unit. They will be responsible for admission work-ups and routine daily care of the infants, and will perform diagnostic procedures under the supervision of a pediatric resident. Students will attend high risk deliveries and learn the basics of neonatal resuscitation. Night call is approximately every third night.

First Day: Contact the Residency Coordinator at 847-3544 before beginning this rotation to schedule a time and meeting place for the first day.

Evaluation Methods: Performance will be evaluated by the pediatric attending and the pediatric residents using the Advanced Integration Evaluation Form.

ACTING INTERNSHIPS AT FAHC, ONCE SCHEDULED, MAY NOT BE DROPPED WITHOUT A REPLACEMENT, AND PERMISSION FROM THE DEPARTMENT.
COURSE NO: PED5503
Title: Pediatric Pulmonology
Site: Vermont Children’s Hospital
Faculty: Thomas Lahiri, MD
Check availability with Vanessa Goodwin: 802-847-3544
Time Commitment: 1 month
Months Offered: By permission of Clerkship Coordinator or Residency Coordinator.
Enrollment: 1 student or pediatric resident per month
Add/Drop forms require the Clerkship or Residency Coordinator’s signature.
Visiting Students: Yes, from US/Canadian LCME approved medical schools ONLY

Course Description

Goals:
1. Recognize, evaluate and treat common pediatric respiratory disorders
2. Interpretation of chest imaging and pulmonary function testing
3. Learn about the management of chronic respiratory illness

Format:
1. Four to five half-day clinics per week (cystic fibrosis and pulmonary)
2. Daily inpatient rounds (both pulmonary service and consultation)
3. Participation in flexible bronchoscopy

First Day: Contact Thomas Lahiri, MD at thomas.lahiri@vtmednet.org before the beginning of the elective to schedule the time and meeting place for the first day.

Evaluation Methods:
1. Direct observation/presentation of case by student
2. Evaluation of new patient and progress notes
3. One didactic presentation per month by the student
**Course Description**

**Goals:** This elective will provide the student with an introduction to the evaluation and management of common problems in pediatric gastroenterology and nutrition, including disorders of the esophagus, stomach, intestines, liver, and pancreas, and feeding problems, nutritional assessment, malnutrition, parenteral nutrition, and special formulas.

**Format:** The student will work as an Acting Resident, performing consultations on hospitalized patients, and assisting at daily outpatient clinics, and during procedures such as upper and lower endoscopy, manometry, biopsy, breath hydrogen testing, and esophageal pH probe studies. In addition to attendance at conferences and textbook and journal reading, the student will select a topic for review.

**First Day:** Contact Michael D’Amico, MD at Michael.d’amico@vtmednet.org before beginning the elective to schedule the time and meeting place for the first day.

**Evaluation Methods:** Performance will be evaluated using the Advanced Integration Evaluation Form.
**COURSE NO:** PED5505  
**Title:** Foreign Pediatrics  
**Faculty:** Jerold F. Lucey, MD and Roger Soll, MD  
**Time Commitment:** 2 months (minimum)  
**Months Offered:** By permission of Clerkship Coordinator or Residency Coordinator.  
**Enrollment:** Unlimited  
Add/Drop forms require the Clerkship or Residency Coordinator’s signature  
**Visiting Students:** No

-------------------------------------------------------------------------------------------------------------------------------------

**Course Description**

**Goals:** This elective will allow the student to observe and participate in the delivery of pediatric care outside of the United States. The experience may be in ambulatory or inpatient pediatrics, including the intensive care nursery.

**Format:** Individual rotations are arranged with Dr. Jerold Lucey. Clerkships are sometimes available in South Africa, England, Germany, Singapore, Argentina, and Shanghai. No travel or living expenses are offered.

**Evaluation Methods:** Evaluations will be provided by the preceptor in the foreign country using the Advanced Integration Evaluation Form.
COURSE NO: PED5507
Title: Primary Care Pediatrics
Site: University Pediatrics
Faculty: Barbara Frankowski, MD; Pamela Jackson, MD; Jerry Larrabee, MD; Eliot Nelson, MD; Mary Lee Ritter, RNC, PNP; Catherine Rude, MD; Nilgun Zimakas, MD; Richard Wasserman, MD; Ann Wittpen, MD; Christa Zehle, MD; Andrea Green, MD; and Lori Racha, MD

Time Commitment: 1 month
Months Offered: By permission of Clerkship Coordinator or Residency Coordinator.
Enrollment: 1 student per month.
Add/Drop forms require the Residency Coordinator’s signature
Visiting Students: NO

Course Description

Goals: This elective will provide students with an opportunity to participate in delivering general pediatric care to children and adolescents in an outpatient setting. These patients will present with a wide variety of medical, psychological and social problems and concerns. It will include health supervision and acute care visits.

Format: Students will work with a panel of practitioners in their practice seeing patients under supervision. Readings and seminars will supplement clinical teaching and experience. Students will give a short (10 minute) topic presentation to office staff and Pediatric residents in the continuity clinic didactic session. Work will include 1 acute care evening per week.

First Day: Contact Cheryl Gingras at University Pediatrics, 847-4696 before beginning the elective to schedule the time and meeting place for the first day.

Evaluation Methods: Performance will be evaluated using the Advanced Integration Evaluation Form with input from all involved practitioners and affiliated staff.
COURSE NO: PED5508
Title: Sports Medicine
Site: Vermont Children’s Hospital
Faculty: James Slauterbeck, MD
Time Commitment: 1 month
Months Offered: By permission of Clerkship Coordinator or Residency Coordinator.
Enrollment: 1 student per month
Add/Drop forms require the Clerkship or Residency Coordinator’s signature
Visiting Students: Yes, from US/Canadian LCME approved medical schools ONLY

-----------------------------------------------
Course Description

Goals:
To learn how to assess patients with sports medicine complaints;
To improve history and physical exam techniques for sports related musculoskeletal injuries;
To develop a broader knowledge of basic sport medicine conditions;
To familiarize oneself with athletic trainers and sports physical therapists in their treatment and prevention of athletic injury;
To develop a better understanding of the interrelationship between the athlete, athletic trainer, coach, physician, and physical therapist.

Format:
The elective will include assigned reading, experience with a professional trainer of athletes, attendance at athletic events where injuries may be expected, ambulatory care of patients with sports injuries, and acting as team physician (under supervision). A short paper (3-5 pages) or an oral presentation will be required and will be assigned by Dr. Slauterbeck. Dr. Slauterbeck will give lectures on various aspects of sports medicine.

First Day:
Contact Pediatric Clerkship Coordinator at 656-0026, 2 weeks before the beginning of this elective to obtain a schedule and list of contacts for the month.

Evaluation Methods:
Performance will be evaluated by the course preceptor using the Advanced Integration Evaluation Form.
COURSE NO: PED5510  
Title: Clinical Genetics  
Site: Vermont Regional Genetics Center  
Faculty: Leah Burke, MD  
Time Commitment: 1 month  
Months Offered: By permission of Clerkship Coordinator or Residency Coordinator.  
Enrollment: 1 student  
Add/Drop forms require the Clerkship or Residency Coordinator’s signature  
Visiting Students: Yes, from US/Canadian LCME approved medical schools ONLY

Course Description

Goals: The student will gain a basic understanding of clinical genetics, dysmorphology, and teratology. S/he will learn to evaluate individuals with dysmorphic findings, analyze pedigree data, and provide genetic counseling. S/he will also gain insight as to the application of genetics in medical care for common diseases such as cancer, in both children and adults. S/he will participate in consideration of the ethical implications of genetics.

Format: The student will attend regularly scheduled clinics in Burlington and at outreach sites. S/he will perform inpatient consultations. There will be brief exposure to light microscope cytogenetics and DNA analysis. Readings and computer programs will be provided. The student will participate in any related conferences that occur during the elective. The student will give a 20-minute oral presentation on a topic of her/his interest in genetics.

First Day: Contact Leah Burke, MD at Leah.burke@vtmednet.org before the beginning of the elective to schedule the time and meeting place for the first day.

Evaluation Methods: Performance will be evaluated using the Advanced Integration Evaluation Form.
COURSE NO: PED5511
Title: Pediatric Infectious Disease
Site: Vermont Children’s Hospital
Faculty: William V. Raszka, MD
Time Commitment: 1 month
Months Offered: By permission of Clerkship Coordinator or Residency Coordinator.
Enrollment: 1 student per month
Add/Drop forms require the Clerkship or Residency Coordinator’s signature
Visiting Students: Yes, from US/Canadian LCME approved medical schools ONLY

Course Description

Goals: This course serves as an introduction to the principles of pediatric infectious diseases. Participants will develop a rational and consistent approach to the ill child with a potential infectious disease complication. Students will learn the important historical and physical examination findings that help guide decision-making. Students will have the opportunity to explore “bugs and drugs” in detail and select particular areas of interest in which to focus.

Format: The student working with the pediatric infectious disease attending, will see all inpatient and outpatient infectious disease consults and patients in the pediatric travel clinic. In addition, the student will participate in joint adult and pediatric infectious disease conferences, microbiology laboratory Rounds, and telephone “curbside” consults.

First Day: Contact William Raszka at William.raszka@uvm.edu before beginning elective to schedule the time and meeting place for the first day.

Evaluation Methods: Performance will be evaluated using the Advanced Integration Evaluation Form.
**Course Description**

**Goals:** Students will develop a basic understanding of the anatomy, physiology and therapy for the most common congenital and acquired pediatric heart diseases.

**Format:** The student will attend regularly scheduled clinics in Burlington and outreach clinics in Vermont and New York, as well as observe diagnostic studies such as echocardiograms and catheterizations. Readings will be directed according to patient exposure. The student will evaluate all inpatient consultations.

**First Day:** Contact Nancy Drucker, MD at nancy.drucker@vtmednet.org before the beginning of the elective to schedule the time and meeting place for the first day.

**Evaluation Methods:** Performance will be evaluated using the Advanced Integration Evaluation Form.
COURSE NO: PED5513
Title: Pediatric Hematology/Oncology
Site: Vermont Children’s Hospital
Faculty: A.C. Homans, MD, Giselle Sholler, MD and Heather Bradeen, MD
Time Commitment: 1 month
Months Offered: By permission of Clerkship Coordinator or Residency Coordinator.
Enrollment: 1 student per month.
Add/Drop forms require the Clerkship or Residency Coordinator’s signature
Visiting Students: Yes, from US/Canadian LCME approved medical schools ONLY

---------------------------------------------------------------
Course Description

Goals: The student will gain knowledge about the diagnosis and care of children with hematological and oncological diseases. S/he will gain experience in looking at peripheral blood smears and bone marrows, and, if desired and available, will learn an approach to clinical and/or laboratory research.

Format: The student will attend the hematology/oncology clinic, Rounds on all hematology/oncology inpatients, and provide subspecialty consultation for inpatients and outpatients. The student may participate in a clinical project and/or laboratory research experience.

First Day: Contact Alan Homans, MD at 847-2850 before the beginning of the elective to schedule the time and meeting place for the first day.

Evaluation Methods: Performance will be evaluated by the pediatric hematology/oncology faculty using the Advanced Integration Evaluation Form.
COURSE NO: PED5514
Title: AI Pediatrics, MMC
Faculty: Lorraine L. McElwain, MD; Jennifer A. Jewell, MD; Jennifer Hayman, MD and Leah Mallory, MD
Time Commitment: 1 month
Months Offered: All
Enrollment: 2 students per month
Visiting Students: Available through MMC

Course Description

Goals: This Acting Internship will give the students the practical experience, in the inpatient setting, of managing hospitalized infants, children, and adolescents.

Format: Students will be assigned to one of two inpatient teams consisting of a PL-3/PL-2, 2 PL-1s and 2 medical students. The Acting Intern will work-up patients with the team leader, discuss the assessment and plan with the attending, and manage the day-to-day care of the patients s/he is following.

Work Rounds and attending rounds will be supervised by the pediatric hospitalist. Teaching Conferences are held after Grand Rounds every Thursday.

Night call is approximately every fourth night.

Evaluation Methods: The team leader, chief resident, team interns, night float resident, service attending, and inpatient director all have input into the final evaluation. Performance will be evaluated using composite information on the Advanced Integration Evaluation Form.

ACTING INTERNSHIPS AT MMC, ONCE SCHEDULED, MAY NOT BE DROPPED WITHOUT A REPLACEMENT.
Course Description

Goals:
The goals of this Acting Internship are:
1. To provide an introduction to the variety and complexity of conditions occurring in newborn infants. This includes antenatal identification and management, as well as the pathophysiology of these disorders. Organ system development and transition from fetal to neonatal life in both preterm and term infants will be emphasized.
2. To allow supervised participation in the care of such infants and to gain an appreciation of the diagnostic and therapeutic modalities used in the intensive care of premature and term infants. Included in the experience is the delivery room management of infants.
3. Successful certification in The American Heart Association/American Academy of Pediatrics Neonatal Resuscitation Program will be expected during the rotation.
4. To learn how the care of an infant in the intensive care unit involves the coordinated care of many individuals to treat the patient and support the family. This includes medical, social (societal, familial), and ethical issues in the NICU.

Format:
The student will function as an Acting Intern with supervision by an attending neonatologist. The student will have specific patient assignments and will be responsible for patient care in a manner similar to that expected of a first year pediatric resident. Residents and Neonatal Nurse Practitioners will care for other patients. Individual cases may allow the student to involve other pediatric subspecialists such as cardiology, endocrinology, genetics, and neurology. The usual number of patients cared for by a student at one time is 3 to 4. The student will be assigned night and weekend call (minimum one/week). An attending neonatologist will be present for teaching and supervision at all times day and night.

Opportunity for participation in neonatal transports may be available.

The AI will be expected to present one journal club conference regarding a recent article or relevant topic at a noon conference.

Evaluation Methods:
Evaluation will be done by the faculty using the University of Vermont College of Medicine Evaluation of Student Clinical Performance Form. The student will have the opportunity to review this evaluation at the end of the elective with the physician who completes the form.

ACTING INTERNSHIPS AT MMC, ONCE SCHEDULED, MAY NOT BE DROPPED WITHOUT A REPLACEMENT.
COURSE NO: PED5520
Title: Pediatric Critical Care
Site: Vermont Children’s Hospital
Faculty: Barry Heath, MD, Amelia Hopkins, MD and Richard Salerno, MD
Time Commitment: 1 month
Months Offered: By permission of Clerkship Coordinator or Residency Coordinator.
Enrollment: 1 student per month.
Add/Drop forms require the Clerkship or Residency Coordinator’s signature.
Visiting Students: Yes, from US/Canadian LCME approved medical schools ONLY

........................................

Course Description

Goals: The student will gain experience and familiarity in the diagnosis and management of critical illness in children. The physiology and pharmacology of critical illness will be stressed.

Format: Clinical instruction in this course will take place in the pediatric intensive care unit, Fletcher Allen Health Care, under the direction of the PICU attending and the senior pediatric resident.

The student will follow patients in the PICU and attend Rounds twice a day. Students will be assigned readings and will attend formal teaching Rounds. Topics may include: blood gas analysis, interpretation of invasive hemodynamic parameters, pediatric airway management, sedation and analgesia, mechanical ventilation, acute respiratory failure, neuro-critical care, sepsis and multiple organ failure, nutrition, and ethical issues. Each student will prepare a patient-related topic for literature review.

First Day Contact Barry Heath, MD at barry.heath@vtmednet.org before the beginning of the elective to schedule the time and meeting place for the first day.

Evaluation Methods: Performance will be evaluated using the Advanced Integration Evaluation Form.
COURSE NO: PED5522
Title: Evaluating the Medical Literature
Site: Vermont Children’s Hospital
Faculty: Joseph D. Dickerman, MD
Time Commitment: 1 month
Months Offered: All except August.
Enrollment: 1 student (must have prior approval from Joseph Dickerman, MD).
Add/Drop forms require the Clerkship or Residency Coordinator’s signature
Visiting Students: No.

Course Description

Goals: Students will develop skills concerning critical analysis of the medical literature, as well as the skills required to write a paper based on the literature examined.

Format: The student and faculty member will agree on a topic, and the student, with faculty guidance, will research that topic and be expected to complete a detailed review of the topic with a full bibliography. The faculty member will review, with the student, multiple drafts of the paper as necessary. A full time commitment is expected. Publication of the paper is not a goal.

First Day: Contact Joseph Dickerman, MD at joseph.dickerman@uvm.edu.

Evaluation Methods: The student will meet with the faculty member as often as necessary. A grade will be awarded based solely on the merit of the paper.
COURSE NO: PED5580
Title: Pediatrics Literature Review
Site: Vermont Children’s Hospital
Faculty: Department of Pediatrics
Time Commitment: 1 month.
Months Offered: By permission of Clerkship Coordinator or Residency Coordinator.
Enrollment: Unlimited. Add/Drop forms require the Clerkship or Residency Coordinator’s signature
Visiting Students: No

Course Description

Goals: This elective will allow the student an opportunity to do a thorough review of a selected pediatrics topic.

Format: Students will choose a topic for literature review and work with the faculty member particularly interested in that topic. Students will review the literature, meet with the faculty advisor weekly and prepare a paper, and/or an oral presentation.

Evaluation Methods: Evaluation will be based on the quality of the final paper and presentation.
Radiology

Students planning a career in Radiology are advised to do no more than one month in this specialty during the Advanced Integration Program unless a second research month is desired. A solid background in pathology and the major clinical disciplines is recommended.

Students will be required to select a subspecialty area in one of the eight sections of Radiology on a first-come, first-serve basis. The eight subspecialty areas available for selection are Chest, Body Imaging, Interventional Radiology, Musculoskeletal, Neuro-radiology, Nuclear Medicine, Pediatrics, and Research.

If you are planning a career in Radiology, please make your plans known to the Section Head of the subspecialty section you choose at the beginning of the elective.

Advisor: Dr. Heather Burbank
Course #: RAD7501
Title: Radiological Subspecialty Electives
Faculty: Radiology and Nuclear Medicine Faculty
Time Commitment: 1 Month
Months Offered: January through June, August through December
Enrollment: 1 Student in Each Subspecialty
Visiting Students: Yes

Course Description

Goals: Students will be offered material in the general principles of x-ray diagnosis. Efforts will principally be directed toward subspecialty techniques of fundamental observations and the role of x-ray studies in solving clinical problems.

Format: The Department members will present unknown case material and didactic sessions in their areas of special interest covering the spectrum of diagnostic radiology and nuclear medicine. Each student is expected, under the supervision of an attending radiologist, to research, write up, and briefly present a case for incorporation into our radiology teaching collection.

Evaluation Methods: The student will be evaluated on his or her ability to discuss the film unknowns, provide meaningful differential diagnoses, and offer a sensible radiologic plan for further work up. A major portion of evaluation will be based on the student's performance on the teaching file case work-up. Failure to submit the teaching file case will result in an incomplete.

A description of the various Radiology subspecialty sections is listed below.
**Course Description**

**Goals:**
The student will be exposed to the full range of imaging procedures and dynamic studies available in a modern nuclear medicine department. Correlation between clinical findings, x-ray studies, and nuclear medicine findings will be stressed.

**Format:**
Daily participation in the day-to-day daily imaging activities will be expected. The student will review all scans and other examinations with the resident and staff each day.

**Evaluation Methods:**
The student will be evaluated on the basis of the daily performance at scan reading sessions. A major portion of the evaluation will be based on the student’s performance on the teaching file case work-up. Failure to submit the teaching file case will result in an incomplete.
Course #: 7501
Title: Body Imaging Subspecialty Elective
Faculty: K. DeStigter, M.D., G. Ebert, M.D., D. Keating, M.D.,
        N. Sturtevant, M.D., B. Sussman, M.D., and J. Tam, M.D.
Time Commitment: 1 Month
Months Offered: January through June, August through December
Enrollment: 2 students per month
Visiting Students: Yes

Course Description

Goals: The student will be introduced to the diagnostic imaging techniques of computerized tomography (CT) and ultrasound (US). Correlation of these studies with clinical information and other diagnostic imaging techniques will be stressed.

Format: The student will participate in these imaging activities on a rotational basis and be responsible for obtaining clinical information as needed and observing the interpretation of the studies under supervision of resident and attending radiology staff. Each student is expected, under the supervision of an attending radiologist, to research, write up, and briefly present a case for incorporation into our radiology teaching collection. This case will be submitted to the UVM teaching web site.

Evaluation Method: Performance will be evaluated on the basis of participation in the daily activities of the body imaging services. A major portion of the evaluation will be based on the student’s performance on the teaching file case work-up. Failure to submit the teaching file case will result in an incomplete.
Course #: 7501
Title: Vascular/Interventional Radiology Subspecialty Elective
Faculty: A. Bhave, M.D., C. Morris, M.D., K. Najarian, M.D., and J. Shields, M.D.
Time Commitment: 1 Month
Months Offered: January through June, August through December
Enrollment: 1 student
Visiting Students: Yes

Course Description

Goals: The student will be introduced to vascular and interventional radiology techniques including peripheral angiography, vascular intervention including PTA and percutaneous renal, biliary, and gastrointestinal intervention. Correlation with clinical data and follow-up will be stressed.

Format: The student will work closely with attending and resident staff observing Interventional Radiology procedures and taking part in patient work-up and follow-up. Formal general radiology lectures geared to medical students are available and required during January through May of 2010.

Evaluation Methods: Evaluation will be based on participation in clinical work-up and daily activities. A major portion of the evaluation will be based on the student’s performance on the teaching file case work-up. Failure to submit the teaching file case will result in an incomplete.
Course #: 7501
Title: Neuroimaging Subspecialty Elective
Faculty: G. Alsofrom, M.D., S. Braff, M.D., C. Filippi, M.D., D. Johnson, M.D., G. Linnell, D.O., and B. Ratkovits, M.D.
Time Commitment: 1 Month
Months Offered: January through June, August through December
Enrollment: 1 student
Visiting Students: Yes

Course Description

Goals: Students will be introduced to modern neuroimaging including newer MRI techniques, such as diffusion and perfusion imaging, spectroscopy, and MR angiography. Clinical correlation and significance will be stressed, as will functional neuroanatomy. Attendance at the Thursday morning Neuroradiology and Neuropathology Conference is encouraged.

Format: Teaching sessions are integrated into morning and afternoon MRI/CT readouts. Communication with clinical colleagues is encouraged.

Evaluation Methods: Evaluation will be based on participation in readout sessions. A major portion of the evaluation will be based on the student’s performance on the teaching file case work-up. Failure to submit the teaching file case will result in an incomplete.
Course #: 7501
Title: Thoracic Radiology Subspecialty Elective
Faculty: P. Dietrich, M.D., G. Gentchos, M.D., C. Green, M.D., and J. Klein, M.D.
Time Commitment: 1 Month
Months Offered: January through June, August through December
Enrollment: 1 student
Visiting Students: Yes

Course Description

Goals: The student will be exposed to thoracic imaging including conventional radiographs, computed tomography, magnetic resonance imaging, and image-guided thoracic interventions including transthoracic biopsy, and percutaneous catheter drainage. The correlation between clinical data and imaging findings and the appropriate use of diagnostic imaging findings and the appropriate use of diagnostic imaging in the evaluation of cardiothoracic disease will be stressed.

Format: The student will attend and participate in daily interpretive sessions with radiology residents, fellows, and attendings, and will observe interdepartmental rounds, consultations, and conferences.

Evaluation Methods: Evaluation will be based on attendance and the quality of participation in interpretation sessions. A major portion of the evaluation will be based on the student's performance on the teaching file case work-up. Failure to submit the teaching file case will result in an incomplete.
Course #: 7501
Title: Pediatric Radiology Subspecialty Elective
Faculty: J. Gallant, M.D. and T. Higgins, M.D.
Time Commitment: 1 Month
Months Offered: January through June, August through December
Enrollment: 1 student
Visiting Students: Yes

Course Description

Goals: The goals of the Pediatric Radiology Clerkship are:
1. To introduce the medical student to the general concepts of Pediatric Radiology.
2. To learn general approaches of the imaging on infants, young children, older children, and adolescents.
3. To gain knowledge regarding the use of specific imaging studies in the evaluation of common pediatric inpatient and outpatient problems.

Format: The student will work closely with faculty and resident staff observing a variety of imaging studies, which include ultrasound examinations, CAT scan, fluoroscopic studies of the gastrointestinal and urinary tract, and plain film radiography. The student will attend daily film review/teaching conferences conducted by the faculty. They will attend all pertinent lectures and conferences given in the Radiology Department during that month. The student is expected to work independently in studying pediatric radiology teaching files in the Radiology Library and completing reading assignments provided by the faculty. The student is expected to research, organize, and complete on teaching file on a pediatric problem of his/her choice. This teaching file will be presented to the faculty at the end of the clerkship.

Evaluation Methods: A grade will be given based on the merit of the teaching file case (thoroughness, clarity, analytical skills, understanding of imaging and its application to pediatrics), as well as the student’s overall performance (i.e. perceived interest, independent study, and knowledge of imaging). Failure to submit the teaching file case will result in an incomplete.
<table>
<thead>
<tr>
<th>Course #:</th>
<th>7501</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title:</td>
<td>Musculoskeletal Radiology Subspecialty Elective</td>
</tr>
<tr>
<td>Faculty:</td>
<td>T. Higgins, M.D., M. Lach, M.D., and D. Lemos, M.D.</td>
</tr>
<tr>
<td>Time Commitment:</td>
<td>1 Month</td>
</tr>
<tr>
<td>Months Offered:</td>
<td>January through June, August through December</td>
</tr>
<tr>
<td>Enrollment:</td>
<td>1 student</td>
</tr>
<tr>
<td>Visiting Students:</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Course Description**

**Goals:**
The student will be exposed to musculoskeletal imaging with a heavy emphasis on CT and MRI.

**Format:**
The student will attend and participate in daily interpretive sessions with Radiology residents, fellows, and attendings, and will observe interdepartmental rounds, consultations, and conferences.

**Evaluation Methods:**
A grade will be given based on the merit of the teaching file case (thoroughness, clarity, analytical skills, understanding of imaging and its application to MSK), as well as the student’s overall performance (i.e. perceived interest, independent study, and knowledge of imaging). A major portion of the evaluation will be based on the student’s performance on the teaching file case work-up. Failure to submit the teaching file case will result in an incomplete.
Course #: RAD7503
Title: Radiation Oncology Clerkship
Faculty: Ruth Heimann, M.D., Ph.D., Thomas Roland, M.D., Deborah Rubin, M.D., Peter Swift, M.D., and H. James Wallace, M.D.
Time Commitment: 1 Month (Daily Clinic)
Months Offered: All (prior consultation with staff is necessary – Jean Menard, 73506)
Enrollment: 1 student
Visiting Students: Yes

Course Description

Goals: To familiarize students with the role of radiation oncology in the care of patients with cancer. To understand the effects of ionizing radiation on normal and malignant cells and the ways radiation oncologists exploit some of the differences. The student will learn about state-of-the-art technology that allows for appropriate radiation delivery. The role of radiation in both curative and palliative settings will be reviewed.

Format: There will be increasing responsibility over the course of the elective for new patient evaluation and examination of previously treated patients in cooperation with other specialty services (e.g. medical oncology, gynecology, ENT, pediatric oncology). The radiation therapy staff will present introductory sessions emphasizing clinical techniques and potentials of radiation therapy and interdisciplinary discussions with other oncology fields.

Evaluation Methods: Evaluation will be based on the quality of participation in work-up of patients, review of pertinent literature, and enthusiasm in correlation of oncologic disciplines in management of the cancer patient. A presentation to the staff related to a topic of interest to the student will be required for an “honors” grade.
COURSE NO: RAD7510
Title: Radiology Clerkship, MMC
Faculty: Department of Radiology and Nuclear Medicine
Time Commitment: 1 month
Months Offered: February, March, April, May, July - November
Enrollment: 2 students
Visiting Students: Yes

Course Description

Goals: The student will be offered material in the general principles of X-ray diagnosis. Efforts will principally be directed toward teaching techniques of fundamental observations and the role of X-ray studies in solving clinical problems.

Format: The Department members will present unknown case material and didactic sessions in their areas of special interest covering the entire spectrum of diagnostic radiology and nuclear medicine. An introduction to principles of therapeutic radiology will also be provided. Each student is expected, under the supervision of an attending radiologist, to research, write-up, and briefly present 2 cases for incorporation into our radiology teaching collection. A computerized self-directed program is also available.

Evaluation Methods: Evaluation will be based largely on the student’s participation in daily clinical activities in the department and the twice daily conferences. The student’s ability to discuss the film unknown, provide meaningful differential diagnoses, and offer a sensible radiologic plan for further work-up will be evaluated as well. A major portion of the final grade will be based on the student’s performance on the teaching file cases work-up.
Orthopaedics and Rehabilitation

We encourage students interested in orthopaedic surgery to major in surgery. Students interested in rehabilitation medicine should select some of their electives in medicine or the clinical neurosciences.

The electives offered by the department will be helpful to students planning careers in family medicine, internal medicine, neurology, orthopaedics, surgery or rehabilitation medicine. Emphasis is on improving knowledge and skills for evaluating and managing patients with musculo-skeletal impairments.

The department is willing to provide guidance in the choice of postgraduate training programs and letter of recommendation as appropriate.

The following electives are offered:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ORTH8501</td>
<td>Physical Med &amp; Rehabilitation</td>
</tr>
<tr>
<td>ORTH8503</td>
<td>Orthopaedics Research Methods</td>
</tr>
<tr>
<td>ORTH8506</td>
<td>AI Orthopaedic Surgery</td>
</tr>
<tr>
<td>ORTH8507</td>
<td>Orthopaedics for the Primary Care Physician</td>
</tr>
<tr>
<td>ORTH8508</td>
<td>Ski Injury Clinic - Sugarbush</td>
</tr>
</tbody>
</table>
COURSE NO: ORTH8501
Title: Physical Med & Rehabilitation
Faculty: Scott E. Benjamin, MD; Roger C. Knakal, MD; Carol A. Talley, MD; and Thomas J. Zweber, MD
Time Commitment: 1 month
Months Offered: All
Enrollment: 1 student per month
Visiting Students: Yes

Course Description

Goals: The goals of this elective are:
1. To learn the principles of evaluation and management of persons with physical impairment due to disease or trauma.
2. To learn how to examine the neuro-muscular skeletal system.
3. To learn to identify and manage the functional problems associated with physical impairments.
4. To become familiar with the skills and roles of the members of the rehabilitation team.
5. To learn the role of the physician specialized in Physical Medicine and Rehabilitation.

Format: The student will experience the broad spectrum of clinical activities carried out by physicians specialized in Physical Medicine and Rehabilitation (PM & R). These include inpatient and outpatient rehabilitation, hospital consultations, physical medicine, electrodiagnostics, and pain management, as well as team leadership and program development. By working up selected patients, the student will become familiar with common PM & R diseases and disabilities, such as stroke, spinal cord injury, traumatic brain injury, amputations, fractures, and chronic pain syndromes.

Evaluation Methods: Evaluation will be based on the student’s medical knowledge, evaluation and management skills, and interactions with the rehabilitation team. In order to be considered for Honors a presentation may be made to the Faculty at the conclusion of the rotation.
COURSE NO: ORTH8503
Title: Orthopaedics Research Methods
Faculty: Bruce Beynnon, PhD
Time Commitment: 1 - 2 months
Months Offered: All
Enrollment: 1 student per month
Visiting Students: Yes

------------------------------------------------------------------------------------

Course Description

Goals: This elective will provide an introduction to research methods in Orthopaedic biomechanics. Emphasis will be placed on involvement in current research on the spine, knee, shoulder, ankle, and sports medicine.

Format: The student will assist in experimental design, implementation, data acquisition analysis, and write-up. S/he will work closely with research personnel in the Department. S/he will participate as a researcher in teaching and will attend orthopaedic Grand Rounds, journal club and the biomechanics journal club.

Evaluation Methods: Performance will be evaluated by the faculty and research personnel on the basis of the quality of the student’s participation and knowledge of the appropriate literature.
COURSE NO: ORTH8506
Title: AI Orthopaedic Surgery
Faculty: Elise Ames, MD; David D. Aronsson, MD; Craig Bartlett, MD; Michael Y. Benoit, MD; John Braun, MD; Mark Charlson, MD; Nathan Endres, MD; David Halsey, MD; James G. Howe, MD; Thomas K. Kristiansen, MD; Martin H. Krag, MD; Jennifer Lisle, MD; James Michelson, MD; Robert D. Monsey, MD; Claude E. Nichols, III, MD; Adam B. Shafritz, MD; James Slauterbeck, MD; and Orthopaedic Residents

Time Commitment: 1 month
Months Offered: All
Enrollment: 3 students per month
Visiting Students: Yes

Course Description

Goals: The student will learn how to perform an accurate and thorough history and physical examination of a patient with a musculoskeletal problem. The student will learn how to formulate a diagnosis and develop a treatment plan. The student will be exposed to outpatient orthopaedics in the office where she/he will see common orthopaedic problems. The student will also rotate on an inpatient service to be exposed to hospital-based orthopaedic problems. The student will work closely with the faculty and residents and perform as an Acting Intern. The student will participate in operative orthopaedic surgery and pre- and post-operative management of the musculoskeletal patient.

Format: The students will select two 2-week rotations on the following orthopaedic subspecialties: sports medicine, adult reconstruction, trauma and fractures, pediatric orthopaedics & scoliosis, hand & upper extremity, spine. On each subspecialty, the Acting Intern will work closely with the orthopaedic faculty and residents as a member of the Health Care Service Team. The student will assume on-call responsibilities every third night and will participate in conferences and attend journal club.

Evaluation Methods: Evaluation will be based on faculty and staff observation.
Course Description

Goals: This four week rotation is designed as an experience in the outpatient clinic setting with orthopaedic attending to allow senior students experience in radiographic interpretation, history taking, and physical examination of patients with musculoskeletal disorders.

Format: Available clinic experience includes pediatric ortho, sports medicine, spine, total joint arthroplasty, upper extremity and the diabetic foot. Exact sequence and content can be arranged to meet the individual student’s interests and needs. Students choose to participate in the operating room at their discretion, and may also choose to work in the casting clinic of they interested.

Evaluation Methods: Evaluation will be based on faculty and staff observation.
Course Description

Goals: The student will learn how to examine and treat common injuries generated in sports, including knee, ankle, leg, arm and shoulder injuries. They will get to help with reduction of fractures and relocation of dislocated joints and help care for all other injuries as well.

Format: The clinic runs from 9:30 am to approximately 4:30 pm. The clinic is open 7 days a week and it is suggested that students be there for the weekend days when it is busiest, but certainly could take off a day or two during the week if they didn’t want to be there all the time.

Evaluation Methods: Evaluation will be based on faculty and staff observation.
Surgery

The primary goal of the Surgery Senior Major Program in Surgery is to prepare the medical student for graduate training in general surgery, a surgical subspecialty, or Emergency Room medicine.

Rotations in general surgery, surgical subspecialties, general medicine, medical subspecialties, and nonclinical areas provide a broad exposure to the pathophysiology of disease and an opportunity to develop management and technical skills in pre-operative and post-operative patient care.

OBJECTIVES

1. To prepare the medical student for a program in graduate education, in general surgery or a surgical subspecialty.
2. To develop diagnostic and therapeutic skills in some of the surgical specialties as well as to help the student select a possible career goal in one of these areas.
3. To develop and enhance technical skills in the operating room and on the ward.
4. To share with the student the responsibility of a graduate physician in preoperative and postoperative care, diagnosis and treatment.
5. To encourage and arrange rotations which provide the student with the opportunity to see techniques of practice as performed in institutions outside FAHC and to see and be seen by surgical services elsewhere, particularly in those hospitals where the student may wish to undertake graduate education.
6. To provide, as advisors, members of the surgical staff who will assist the student in planning a surgery senior major program and selecting a residency program.
7. To provide the student with the opportunity, through a library search, a patient chart review and/or laboratory investigation, to complete a scholarly project, assemble and prepare the data in the form of a scientific article acceptable for publication in a professional journal and to present this research at a scientific seminar.
8. To emphasize the basic science principles of clinical surgery, both by a one-month basic science review as well as by the application of these principles during clinical rotations.

Required Rotations:

- Surgical Pathophysiology Review: SURG9511 1 month
- Acting Internship in General Surgery (FAHC): SURG9516 *1 month
- Acting Internship-Surgical Career Specialty (FAHC): SURG9508 1 month
- Anatomy OR (Special arrangement by approval): ANAT1002 1 month
- Scholarly Project: SURG9595 **1 month
- Completion of the ATLS course (held in February and April)

For those students anticipating a career in one of the surgical subspecialties, an Acting Internship in that specialty should be performed here: Neurosurgery, Otolaryngology, Urology or Orthopedic Surgery.

* Pre-scheduled by lottery
** By arrangement with the Director
For those students who are undecided or choosing a career path in General Surgery, two Surgery acting internships are required.

Advisors:

In addition to the director of the Surgical Major Program, each student may have one or more advisors. Students with a career goal in a surgical specialty will want a second advisor from that specialty area. That same individual may serve as the advisor for the scholarly project or the student may select a different advisor from another department for this. Each student's program of rotations and any subsequent change during the course of the Surgery Senior Major Program must be approved by both the specialty advisor and the program director.

Extramural Rotations:

The one-month Surgical Pathophysiology Review course, the two months Acting Internship at the FAHC and the month of Anatomy must be completed in Burlington. Approval for extramural rotations during the remainder of the Surgery Senior Major Program may vary depending on the student's performance at the University of Vermont College of Medicine and on the quality of the proposed extramural rotation.
Course Description

Goals: This elective will help the student develop confidence in evaluating common and emergent eye disorders in both pediatric and adult patients. They will gain mastery of various ophthalmic equipment.

Format: Students will evaluate patients in a clinic setting with a doctor, and be involved in surgical observation. Time will be spent each day with the doctor reviewing a chosen topic of interest.

Evaluation Methods: Performance will be evaluated by staff observation. Evaluation will be made in the following form:
1. Fund of knowledge
2. Data acquisition skills
3. Clinical judgment
4. Motivation and interest
5. Interpersonal skills
6. Overall performance

Each will be ranked 1 through 6 (1=fail, 2=poor, 3=average, 4=very good, 5=outstanding, 6=no comment).

Narrative: Strengths and weaknesses.
Comments
COURSE NO: SURG9501
Title: AI Surgical Critical Care, FAHC
Faculty: Bill Charash, MD, Director and Members of the Surgery Attending Staff
Time Commitment: 1 Month
Months Offered: All
Enrollment: 2 students per month
Visiting Students: Yes

--------------------------------------------------------------------------------

Course Description

Goals: The student will function as an integral member of the multidisciplinary medical team directing the care of critically ill patients in the surgical intensive care unit. The student will share responsibility with the junior house staff on the surgical critical care service for the care of 2-3 patients. S/he will be supervised directly by the senior resident and attending on the service. During this rotation, the student will learn to treat complex disease states with multiple organ involvement, to obtain, integrate and use data in a highly technical environment, and to formulate treatment plans based on basic pathophysiologic principles. Exposure to subspecialty neurosurgical care in areas of brain tumors, brain aneurysms, and spinal diseases is also available.

Through a combination of daily teaching Rounds and formal lecture sessions, the core curriculum will cover hemodynamic monitoring, use of inotropes and vasodilators, shock, arrhythmias, pacemakers/IABP, airway management, mechanical ventilation, interpretation of arterial blood gases, use of sedation/analgesics/muscle relaxants, fluid/electrolyte problems, infectious disease, nutrition, endocrine emergencies, and trauma.

Format: 1. Introduction: At the beginning of the elective, the students will be provided with an introduction to the rotation - discussing the objectives and the expectations for the student during the elective.
2. Clinical Experience: The students will actively participate in daily teaching/work Rounds and will be responsible for following 2-3 patients. It is expected that each student will acquire presentation skills, be able to formulate differential diagnoses, and recommend therapy. In addition, the student will be given the opportunity to perform procedures - including the insertion of arterial lines, central lines, and intubations.

Evaluation Methods: Evaluation will be based on daily clinical performance
COURSE NO: SURG9505
Title: AI Surgical Critical Care, MMC
Faculty: Attending surgeons on SCU Surgical Service
Time Commitment: 1 month
Months Offered: All
Enrollment: 2 students per month
Visiting Students: Available through MMC

Course Description

Goals: The student will function as an integral member of the multidisciplinary team directing the care of critically ill and injured patients in the Special Care Unit. The student will share responsibility with the junior housestaff on the Blue Surgical Service for the care of 2-3 patients at a time; he/she will be supervised directly by a resident, and attending on the service. During the rotation, the student will learn the pathophysiology of complex injury and critical disease states. The student will learn to obtain, integrate and use highly technical monitoring data to formulate treatment plans.

The surgical critical care section manages all patients with critical injuries including neurotrauma, and non-trauma patients with critical surgical illness. Through a combination of daily teaching rounds and formal lecture sessions, the core curriculum will cover hemodynamic monitoring, use of inotropes and vasodilators, shock, arrhythmias, airway management, mechanical ventilation, interpretation of arterial blood gases, use of sedation/analgesics/muscle relaxants, fluid/electrolyte problems/acid base disorders, infectious disease, nutrition, endocrine emergencies and trauma.

Format: Introduction: At the beginning of the elective, the students will be provided with an introduction to the rotation – discussing the objectives and the expectations for the student during the elective.

Clinical Experience: The students will actively participate in daily teaching/work rounds and will be responsible for following 2-3 patients. It is expected that each student will acquire presentation skills, be able to formulate differential diagnoses, and recommend therapy. In addition, the student will be given the opportunity to perform procedures – including the insertion of arterial lines, central lines, Swan-Ganz catheters, and intubations.

Evaluation Methods: Performance will be evaluated by an essay exam and clinical evaluations.

ACTING INTERNSHIPS AT MMC, ONCE SCHEDULED, MAY NOT BE DROPPED WITHOUT PERMISSION FROM THE VICE CHAIR FOR EDUCATION.
COURSE NO: SURG9506
Title: AI Thoracic & Cardiac Surgery
Faculty: Frank Ittleman, MD; Bruce Leavitt, MD; Mitchell Norotsky, MD; and Joseph Schmoker, MD
Time Commitment: **1 month
Months Offered: All
Enrollment: 1 student per month
Visiting Students: Yes

--------------------------------------------------------

Course Description

Goals: The goals of this Acting Internship are:
1. To observe and participate in the evaluation and management of patients with surgical thoracic and cardiac disease.
2. To learn the application of monitoring techniques and pharmacologic manipulation in the management of the critically ill cardiac patient.
3. To participate in the intra-operative care of cardiac and thoracic patients, and to improve basic surgical technique.
4. To increase one’s knowledge base of common cardiac and thoracic disease processes.

Format: This is a one-month Acting Internship-type clerkship with days divided between the ward, intensive care unit, and Operating Room, and every fourth night on call in the hospital. Regular Rounds will be made on a daily basis with the house staff, and weekly teaching Rounds with an attending surgeons. Students are allowed and encouraged to participate actively in the pre-operative, intra-operative, and post-operative management of cardiothoracic patients.

Evaluation Methods: Evaluation will be based upon assessment of performance by the attending physicians and the senior resident of the service.

ACTING INTERNSHIPS AT FAHC, ONCE SCHEDULED, MAY NOT BE DROPPED WITHOUT PERMISSION FROM THE VICE CHAIR FOR EDUCATION.

** A two-week clinical elective is also available. This option is available with parallel format and goal suitable for a shorter experience.
COURSE NO: SURG9508
Title: AI Neurosurgery
Faculty: Bruce I. Tranmer, MD; Chair; MD; Paul Penar, MD; Michael Horgan, MD; Ryan Jewell MD; Joseph Arguelles MD
Time Commitment: 1 month
Months Offered: All
Enrollment: 2 students per month
Visiting Students: Yes

Course Description

Goals: This Acting Internship will give the student a firm background in the fundamentals of the neurological exam, the diagnostic work-up of the neurosurgical patient, and the opportunity to participate in neurosurgical operative procedures. The teaching program is planned to give the student a solid foundation in the pathophysiology of neurosurgical disease and to form the basis from which the student can evaluate both routine and emergent neurosurgical conditions. The emphasis is on giving the student a working knowledge of neurosurgical practice from the standpoint of the specialist; the rotation also gives students interested in primary care an opportunity to learn to recognize both chronic and emergent neurosurgical disease. Exposure to all neurosurgical diseases of the brain such as brain tumors and brain aneurysms, as well as spinal and peripheral nerve disorders is available.

Format: The student will be a working member of the neurosurgical team. S/he will be under the immediate supervision of the chief resident and the attending staff. S/he shall participate in all daily Rounds with the neurosurgical house staff and all teaching conferences. The conferences consist of Neurosurgery Grand Rounds, Neuroscience Grand Rounds, Neuroradiology and Neuropathology Rounds, and Tumor and Vascular Conferences, all of which are held on Thursdays. The student shares night call with one of the senior neurosurgical residents and is encouraged to scrub on all trauma cases during her/his nights on call. If the student so desires, s/he can also be called to participate in ER operative cases on her/his "off" nights. The latter is not mandatory. The student is encouraged to accompany the neurosurgical resident on all emergency room calls during the day. This provides a first-hand experience in caring for the acutely ill neurosurgical patient. The student is especially encouraged to participate on all cases which s/he has worked-up. Scrubbing on cases in which s/he has not been involved pre-operatively is at the discretion of the attending physician. Students are also encouraged to join the attending neurosurgeons in the outpatient clinics where new and follow-up patients with a wide variety of neurosurgical problems are assessed, and management plans are discussed.

Evaluation Methods: Evaluation will be based on staff and senior resident observation.

ACTING INTERNSHIPS AT FAHC, ONCE SCHEDULED, MAY NOT BE DROPPED WITHOUT PERMISSION FROM THE VCE CHAIR FOR EDUCATION.
Course Description

Goals: The goals and format are varied to suit the individual needs of the student.

Generally this elective is intended to acquaint the student with the management of the more common eye problems, and is particularly suited for students interested in primary or emergency care. It is also useful for students interested in ophthalmology. It enables them to become better acquainted with ophthalmology as a potential career.

Reading Assignment: Basic Ophthalmology, American Academy of Ophthalmology, by Cynthia A. Bradford., chapters 1, 2, 3, 5 and 7. Also read Retina by Stephen J. Ryan (not on reserve) – see additional information on COMET re: this assignment – this should be done prior to the rotation.

Evaluation Methods: Evaluation will be based on staff observation. A written examination and topical presentation are required.
COURSE NO: SURG9511
Title: Surgical Pathophysiology Review
Faculty: All Surgical Staff (Peter Cataldo, MD, Director)
Time Commitment: 1 month
Months Offered: March 2010 and March 2011
Enrollment: Limited to all Surgery Majors ONLY
Visiting Students: No

Course Description

Goals: The Surgery Senior Major Pathophysiology course is conducted over four weeks and is designed to help students achieve an advanced understanding of the pathophysiology of surgical disease, with particular emphasis on using pathophysiologic principles to evaluate and treat surgical disease. Topics include shock/trauma, gastrointestinal disease, cardiac and vascular disease, oncology, and urology. In addition, there are several lectures on management of medical problems in the surgical patient.

Format: Each topic is reviewed in a didactic fashion by an expert lecturer from the Department of Surgery or medical school. Following this, clinical cases are discussed with significant student participation. Printed materials and references are provided in advance to help students prepare for each session.

Evaluation Methods: Instructors are requested to evaluate the student presentations and report their interest and involvement. A written examination is given at the completion of the course. The value of the course is discussed with the students at the end of the final session. Constructive criticism is welcomed. Grades will be Honors, Pass, and Fail.
**COURSE NO:** SURG9512  
**Title:** Pediatric Otolaryngology  
**Faculty:** Richard Hubbell, MD  
**Time Commitment:** 1 month  
**Months Offered:** All  
**Enrollment:** Limited to 2 students per month in all otolaryngology courses (SURG9512, SURG9513, SURG9514 and SURG9518)  
**Visiting Students:** Yes

-------------------------------

**Course Description**

**Goals:** Emphasis will be on the evaluation and management of outpatient pediatric otolaryngologic problems with an exposure to operative pediatric otolaryngology.

**Format:** Patient examination experience is developed in a preceptorship setting with daily informal patient discussions. Several general didactic conferences and lectures delivered weekly are available to the students during their rotation.

**Evaluation Methods:** Performance will be evaluated by the attending preceptor and resident based on daily clinical experience, as well as a written examination at the end of the rotation.
COURSE NO: SURG9513
Title: Otolaryngology Preceptorship
Faculty: William Brundage, MD; David Charnock, MD (Rutland); Richard N. Hubbell, MD; Gary P. Landrigan, MD; Donna J. Millay, MD; Theodore Shattuck, MD (Rutland); Damon Silverman, MD; and Robert A. Soffer, MD
Time Commitment: 1 month (2 weeks in Burlington; 2 weeks in Rutland)
Months Offered: All
Enrollment: Limited to 2 students per month in all otolaryngology courses (SURG9512, SURG9513, SURG9514 and SURG9518)
Visiting Students: Yes by special approval

Course Description

Goals: Emphasis is primarily on evaluation and management of outpatient otolaryngologic problems with exposure to routine otolaryngologic operative procedures. This elective is ideal as initial otolaryngological exposure for the student going into medicine, family medicine, or pediatrics.

Format: Patient examination experience is developed in a preceptorship setting with daily informal seminars. The students have the option of spending two weeks in Rutland along with two weeks in Burlington to give a balance between the private and academic environments.

Evaluation Methods: Performance will be evaluated by the attending preceptor and resident based on daily clinical experience as well as a case-based oral examination at the end of the rotation.
<table>
<thead>
<tr>
<th><strong>COURSE NO:</strong></th>
<th>SURG9514</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Title:</strong></td>
<td>Otolaryngology</td>
</tr>
<tr>
<td><strong>Faculty:</strong></td>
<td>William Brundage, MD; Richard N. Hubbell, MD; Gary Landrigan, MD; Donna J. Millay, M.D; Damon Silverman, MD; and Robert A. Sofferman, MD</td>
</tr>
<tr>
<td><strong>Time Commitment:</strong></td>
<td>1 month</td>
</tr>
<tr>
<td><strong>Months Offered:</strong></td>
<td>All</td>
</tr>
<tr>
<td><strong>Enrollment:</strong></td>
<td>Limited to 2 students per month in all otolaryngology courses (SURG9512, SURG9513, SURG9514 and SURG9518)</td>
</tr>
<tr>
<td><strong>Visiting Students:</strong></td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Course Description**

**Goals:** Emphasis will be on the evaluation and management of outpatient otolaryngologic problems with an exposure to operative otolaryngology as well.

**Format:** Patient examination experience is developed in a preceptorship setting. The student will spend time in the office and operating room. In the office, the goals will be to develop the ability to perform a complete head and neck examination and learn how to manage common otolaryngologic problems. Student will also be encouraged to visit the operating room and become familiar with common ENT procedures.

**Evaluation Methods:** Performance will be evaluated by the attending preceptor and resident based on daily clinical experience as well as a case-based oral examination at the end of the rotation.
Course Description

Goals: This course aims to incorporate the student as a team member in Pediatric Surgery. The program fulfills one of the requirements for the Surgical Senior Major. The student works on all aspects of pediatric surgical diseases including the pre-operative work-up and decision-making, the operative experience, and the post-operative management and follow-up of the child. Students are instructed in and participate with the care of the pediatric trauma patient as well, including non-operative management. Hands on operative experience is provided to the student with an interest commensurate with technical ability.

Format: The rotation requires close association with the surgical resident on the service, pre-operative work-ups are carried out, daily notes are written on patients, and basic science principles are stressed in the conduct of patient care. The student takes part in the review sessions for Core students and delivers a lecture on a subject relating to one of the current patient's problems.

Evaluation Methods: Evaluation will be based on interest shown, involvement in patient care, analytic ability, evidence of specific reading on subjects, accuracy of chart notes, to a limited extent technical ability, and the quality of the subject review.

ACTING INTERNSHIPS AT FAHC, ONCE SCHEDULED, MAY NOT BE DROPPED WITHOUT PERMISSION FROM THE VICE CHAIR FOR EDUCATION.
COURSE NO: SURG9516
Title: AI Surgery
Faculty: Members of the Surgery Attending Staff
Time Commitment: 1 month (refer to requirements, p. 185)
Months Offered: All
Enrollment: 5 students per month
Visiting Students: Yes

Course Description

Goals:
1. To develop diagnostic and therapeutic skills in the management of the surgical patients and her/his medical/surgical problems.
2. To function constructively under the demands of clinical practice conditions.
3. To actively participate in the pre-operative care, surgery and post-operative care of the surgical patient.
4. To emphasize the basic science principles of clinical surgery by the application of these principles during an Acting Internship.
5. To become acquainted with and perform some of the teaching functions of a house officer toward junior students.

Format: The student is assigned to one of five surgical services with the same responsibilities, under supervision, as a G-1 house officer to include:
1. Work-ups
2. Decision making in pre-op cases
3. Interpretation of pre-op and post-op X-rays
4. Assisting in operative cases - under supervision:
   a. Retraction
   b. Skin closure
   c. Incision and drainage
   d. Central venous line placement
   e. Chest tube placement and removal
   f. Debridement
   g. Cantor tube placement
   h. NG tube placement
   i. Blood drawing
5. Assuming responsibility for post-op care
6. Work Rounds
7. Alternate night call (no more than every third night) in hospital
8. Daily chart notes on patients

The student is a member of a team including a Senior House Officer who carries overall responsibility and is the student's immediate supervisor. Surgery services are Red, Blue, White, Trauma and the Emergency Surgical Service.

Evaluation Methods: Performance will be evaluated by the attending and resident staff of that particular service using the Advanced Integration Evaluation Form.

ACTING INTERNSHIPS AT FAHC, ONCE SCHEDULED, MAY NOT BE DROPPED WITHOUT PERMISSION FROM THE VICE CHAIR FOR EDUCATION.
**Course Description**

**Goals:** This elective will provide the student with a significant clinical or laboratory investigative experience. The course is particularly suited to those students contemplating an academic career.

**Format:** The student will undertake a research project, which is part of an ongoing clinical or laboratory investigation, or in special circumstances, may undertake an independent project. The project director may be a scientist at UVM or another institution. Enrollment is subject to approval of the course director and the director of the Surgery Senior Major Program. Students in this program may have certain other requirements of the Surgery Senior Major Program waived at the discretion of the director of the Surgery Senior Major Program.

**Evaluation Methods:** Evaluation will be based on a written scientific report submitted to the project director.
COURSE NO: SURG9518
Title: AI Otolaryngology
Faculty: William Brundage, MD; Richard Hubbell, MD; Gary Landrigan, MD; Donna Millay, MD; Damon Silverman, MD; and Robert Sofferman, MD
Time Commitment: 1 month
Months Offered: All
Enrollment: Limited to 2 students per month in all otolaryngology courses (SURG9512, SURG9513, SURG9514 and SURG9518)
Visiting Students: Yes

Course Description

Goals: The student will gain a broad-based understanding of the various aspects of otolaryngology, including office practice, inpatient care, operating room experience, and Emergency Room care.

Format: The student will act as part of the residency staff. S/he will be partially responsible, under direct resident and attending staff supervision, for the evaluation of office patients, the management of inpatients, and will be assisting in surgical procedures. The student will take call every fourth night along with a designated resident and will participate in the work-up and treatment of patients in the Emergency Room with the resident's supervision.

A basic text will be provided but the student should expand his or her knowledge by consulting textbooks and journals of otolaryngology, and s/he may be asked to give a brief presentation on a designated topic at the end of the rotation.

Evaluation Methods: Performance will be evaluated by the attending preceptor and resident based on daily clinical experience as well a case-based oral exam at the end of the rotation. Any presentations will also be critiqued and serve as a means of evaluation.

ACTING INTERNSHIPS AT FAHC, ONCE SCHEDULED, MAY NOT BE DROPPED WITHOUT PERMISSION FROM THE VICE CHAIR FOR EDUCATION.
COURSE NO:        SURG9519
Title:            AI Urology
Faculty:          Thomas L. Jackson, MD; Richard T. Kershen, MD; Gerald Mingin, MD, Scott Perrapato, MD, Mark K. Plante, MD; and Samuel Trotter, MD
Time Commitment: 1 month
Months Offered:   All
Enrollment:       Maximum of 1 student per month
Visiting Students: Yes

Course Description

Goals: The rotation will provide the student with exposure to:
1. Assessment of patients in the office setting
2. Development of diagnostic and therapeutic plans for common urologic problems
3. Participation in care of hospitalized patients (urology and consultation services)
4. Operating room and urologic surgery

Format: The structure of the course involves daily Rounds with attendings to discuss patients, office hours with faculty, participation in the operating room as 1st or 2nd assistant, and initial assessment of patients on the consultation service.

Evaluation Methods: Performance will be evaluated using the departmental Student Evaluation Form, focusing on patient presentations and preparation for the operating room experience.
Course Description

Goals: This elective will promote the understanding of clinical wound healing and to correlate the relationships between tissue handling techniques and grafting with the fundamental biology of wound healing. The student will understand the relationship between deformity from any cause and difficulties with body image and self-esteem.

Format: The student will have inpatient and outpatient surgical and office experience, both at the Medical Center or Rutland Hospital, if desired. Students will be on call with the attending surgeon and expected to participate in emergency care of wounds and handle surgical problems. The course will be tailored, if possible, to the special needs of each student.

Evaluation Methods: Evaluation will be based on observation of the staff. In general this course will be individualized and will be conducted as a one-on-one program.
COURSE NO:        SURG9530
Title:            AI Vascular Surgery, MMC
Faculty:          Attending Surgeons on Green Surgical Service
Time Commitment: 1 month
Months Offered:   All
Enrollment:       1 student per month
Visiting Students: Available through MMC

Course Description

Goals: To allow the medical student to function at the level of a surgical intern, under the close supervision of the attending and resident staff.

Provide the opportunity for acquisition of technical skills required of a surgical intern, in a structured and supervised environment.

While an Acting Intern in Vascular Surgery, the student will:

• Accept direct intern level patient care responsibility under the close supervision of the surgical attending staff.
• Function as an important member of the surgical team.
• Attend all educational conferences of the Department of Surgery.
• Attend office or outpatient clinic along with their housestaff team.
• Participate in the preoperative planning, surgical procedures and postoperative care for their patients.

Format: Daily teaching, work rounds, educational conferences.

Evaluation Methods: Performance will be evaluated by clinical evaluations.

ACTING INTERNSHIPS AT MMC, ONCE SCHEDULED, MAY NOT BE DROPPED WITHOUT A REPLACEMENT.
COURSE NO: SURG9531  
Title: AI General/Trauma Surgery, MMC  
Faculty: Attending Surgeons on Blue Surgical Service  
Time Commitment: 1 month  
Months Offered: All  
Enrollment: 1 student per month  
Visiting Students: Available through MMC

-----------------------------------  
Course Description

Goals: To allow the medical student to function at the level of a surgical intern, under the close supervision of the attending and resident staff.

Provide the opportunity for acquisition of technical skills required of a surgical intern, in a structured and supervised environment.

While an Acting Intern in General/Trauma Surgery, the student will:
- Accept direct intern level patient care responsibility under the close supervision of the surgical attending staff.
- Function as an important member of the surgical team.
- Attend all educational conferences of the Department of Surgery.
- Attend office or outpatient clinic along with their housestaff team.
- Participate in the preoperative planning, surgical procedures and postoperative care for their patients.

Format: Daily teaching, work rounds, educational conference.

Evaluation Methods: Performance will be evaluated by an essay exam and clinical evaluations.

ACTING INTERNSHIPS AT MMC, ONCE SCHEDULED, MAY NOT BE DROPPED WITHOUT A REPLACEMENT.
COURSE NO: SURG9532
Title: AI Pediatric Surgery, MMC
Faculty: Attending Surgeons on Red Surgical Service
Time Commitment: 1 month
Months Offered: All
Enrollment: 1 student per month
Visiting Students: Available through MMC

Course Description

Goals: To allow the medical student to function at the level of a surgical intern, under the close supervision of the attending and resident staff.

Provide the opportunity for acquisition of technical skills required of a surgical intern, in a structured and supervised environment.

While an Acting Intern in Pediatric Surgery, the student will:
- Accept direct intern level patient care responsibility under the close supervision of the surgical attending staff.
- Function as an important member of the surgical team.
- Attend all educational conferences of the Department of Surgery.
- Attend office or outpatient clinic along with their housestaff team.
- Participate in the preoperative planning, surgical procedures and postoperative care for their patients.

Format: Daily teaching, work rounds, educational conference.

Evaluation Methods: Performance will be evaluated by clinical evaluations.

ACTING INTERNSHIPS AT MMC, ONCE SCHEDULED, MAY NOT BE DROPPED WITHOUT A REPLACEMENT.
COURSE NO:                  SURG9533
Title:                      AI Transplant Surgery, MMC
Faculty:                    Attending Surgeons on Transplant Surgical Service
Time Commitment:           1 month
Months Offered:            All
Enrollment:                1 student per month
Visiting Students:         Available through MMC

Course Description

Goals: To allow the medical student to function at the level of a surgical intern, under the close supervision of the attending and resident staff.

Provide the opportunity for acquisition of technical skills required of a surgical intern, in a structured and supervised environment.

While an Acting Intern in SCU Surgery, the student will:
• Accept direct intern level patient care responsibility under the close supervision of the surgical attending staff.
• Function as an important member of the surgical team.
• Attend all educational conferences of the Department of Surgery.
• Attend office or outpatient clinic along with their housestaff team.
• Participate in the preoperative planning, surgical procedures and postoperative care for their patients.

Format: Daily teaching, work rounds, educational conferences.

Evaluation Methods: Performance will be evaluated by an essay exam and clinical evaluations.

ACTING INTERNSHIPS AT MMC, ONCE SCHEDULED, MAY NOT BE DROPPED WITHOUT A REPLACEMENT.
Surgery Subspecialty Rotation

COURSE NO: SURG9550
Title: Surgery Subspecialty Rotation
Faculty: Ted James, MD, Director and Faculty of the Departments of Surgery, Anesthesiology, and Orthopaedics & Rehabilitation

Time Commitment: 1 month
Months Offered: Feb 2010 through Mar 2010
Enrollment: 8 students per month
Visiting Students: No

Course Description

Goals: This rotation will provide practical experience and exposure to commonly encountered clinical problems in two surgical subspecialty disciplines.

Format: Students will spend 15 days on each rotation. Clinical responsibilities will be determined by the subspecialty services. A list of available rotations at Fletcher Allen Health Care (FAHC) will be available in the Surgery Education Office, 847-3667.

Maine Alternative: Students may complete the 9550 requirement at Maine Medical Center. Rotations at other university affiliated institutions must be pre-approved by the course director and faculty at the sponsoring institution. Rotations at Maine Medical Center depend on housing availability, which is determined by the Office of Medical Education at Maine Medical Center.

Exemption Alternative: Students who are completing two separate months of Surgery Subspecialty Rotations (Acting Internships) may request exemption from the required Surgery Subspecialty Rotation.

Evaluation Methods: Performance will be evaluated using the 9550 Senior Surgery Evaluation Form for each 15-day rotation.

NOTE: THIS ROTATION IS REQUIRED OF ALL STUDENTS.

Alternate Fulfillment: Students may also choose to do their 9550 rotations at another location other than FAHC or Maine Medical. The following requirements are needed 3 weeks BEFORE the start of the rotation for approval by Dr. James: (1) fill out an Alternate Fulfillment Request and forward it to Brenda. Barr@vtmednet.org (Surgery Education Student Coordinator); (2) the attending at that location will have to send an email to Brenda Barr with the following information – (a) basic role of the student while on the rotation, (b) where the student will have patient contact – inpatient, OR, clinic or any combination of these, (c) Who the student will be following during the rotation (d) who will complete the evaluation on the student.
**Course Description**

**Goals:**
The goals of the Scholarly Project are:
1. To provide the student with the experience of gathering, organizing, evaluating, presenting, and defending a scholarly medical paper in both oral and written format.
2. To enhance the student’s ability to make future contributions to medical knowledge.
3. To enhance the student’s ability to critically read and evaluate medical and scientific literature.

**Format:**
The Scholarly Project may be a laboratory or clinical investigation on a specific problem. The project may be conducted under the direct supervision of any member of the UVM faculty, or the faculty of any other university, following approval by the course director. A project outline is to be submitted to the project director prior to the beginning of the project. A written proposal including background material and methodology is to be submitted in the fall. A written paper is due in April. Oral presentations will be held in May.

**Evaluation Methods:**
The final paper must be acceptable to the faculty member directing the individual project. The paper must also be acceptable to the project director. A committee will judge the oral presentations. Prizes for the outstanding contributions will be awarded.
Course Description

Goals: The goals of this elective are:
1. To equip every graduating MD with the knowledge and skills to adequately diagnose and treat all life-threatening emergencies and most common emergent problems they will encounter.
2. To provide the opportunity to learn methods of initial evaluation of multiple forms of acute medical problems, permitting the study of patients as they present without prior medical knowledge, by active participation in treatment of acute problems under the supervision of ED attendings.
3. To develop technical skills necessary for management of acute illnesses under staff supervision.
4. To expose the student to the interfaces between medicine, surgery, and other specialties.
5. To develop a fund of knowledge of basic physiology and disease processes relative to the patients seen during the rotation, and to be able to discuss the management of the illnesses that they have evaluated during their rotation.
6. To expose the student to the decision-making process relating to hospital admission.
7. The student should be able to:
   A. Demonstrate and discuss the principles of cardio-pulmonary resuscitation and other cardiac emergencies.
   B. Demonstrate and discuss the management of multiple trauma victims, including priorities of management, airway management, and treatment of shock.
   C. Be prepared to handle those emergencies that require emergent action as
      a. Tension Pneumothorax – needle thoracostomy
      b. Airway management – adults and infants
      c. Hemopericardium
      d. Life-threatening cardiac arrhythmias
   D. Gain skills in procedures such as
      a. Suturing wounds
      b. Draining abscesses
      c. Splinting
      d. Starting IVs
      e. Joint reductions

Format: 1. Students will work about 20 – 8 hour shifts during the month. The first day will be spent in orientation including reviewing a computer-based tutorial on how to use the electronic documentation tool and tracking system.
2. Students may see patients first. Each student coordinates closely with the ED attendings. After initial evaluation at the attending's discretion, further evaluation and treatment may be carried out by the student, but there must be actual patient contact by the supervising physician. The attending should be kept aware of the nature and severity of problems being seen by the student. Prior to patient discharge, the attending will review the diagnosis and instructions.

3. The patient load fluctuates widely in the Emergency Department. In addition, urgency of treatment varies widely. There are critical emergencies and non-urgent emergencies. A change of pace may often be required. There will be times when teaching and supervision can be orderly and systematic, and times when the student may act mainly as an observer and junior member of the team. Efficient, excellent patient care must take first priority. This should rarely, if ever, conflict with an excellent learning experience.

4. Teaching Conferences are scheduled at 8:00 A.M. on weekdays Monday through Friday and are required.

5. All students are required to complete all of the COMET Emergency Medicine modules, both reading and questions, in order to pass the course. This is true regardless of the location the student chooses for her/his emergency medicine rotation (FAHC, MMC, or remote site).

6. All students will present a morning conference in the latter part of the rotation. The student should choose a subject of interest to him/her and have the subject approved by the medical director before presentation. These presentations should be about 30 minutes in length and will be part of the regular conference schedule. They may relate to a patient seen by the student during the rotation.

7. Students will spend a half-day with the Burlington Fire Department Ambulance crew responding to calls. Waiting time should be spent learning back boarding, how to apply traction splints, and C collars, and becoming familiar with the capabilities of this ambulance unit.

8. You may only drop the rotation if you find another student to take your spot for that month.

**Evaluation Methods:**

1. Audit of the care rendered by the student is conducted by review of the patient's charts and by observation of the student during the rotation by the attending staff.

2. At the end of the rotation there will be a brief multiple choice exam based on the learning objectives. Successful completion of the exam will be required of all UVM students regardless of where they do their rotation.

3. Students must demonstrate cardiac resuscitation skills including CPR, rhythm recognition, and knowledge of cardiac drugs.

4. Students desiring an evaluation-exit interview should schedule a time to meet with one of the attendings.

5. A review of timely completion of COMET modules for teaching conference preparation will be done.
COURSE NO: SURG9503
Title: Clinical Emergency Medicine, MMC
Faculty: Kate Drummond, DO, Course Director, et al.
Time Commitment: 1 month (calendar)
Months Offered: All
Enrollment: Maximum of 5 students/month (2-3 slots reserved for UVM seniors)
Visiting Students: Available through MMC

Course Description

Goals: To practice recognition of acute life-threatening conditions and exacerbation of serious disease while also participating in a resuscitative team response in a strictly supervised setting.

The following objectives are expected:

- To apply the knowledge of pathophysiology assimilated throughout the clerkships in managing root causes of a life-threatening conditions, e.g. acidosis, ischemia, obstruction, sepsis
- To become familiar with the use of equipment involved in the stabilization and resuscitation of patients, e.g. artificial airways, splints, defibrillators
- To understand the role of the Emergency Department as a part of the health care delivery system
- To gain insight into principles of risk management as it impacts patient disposition through knowledge of community resources, and probability of adverse outcome
- To have exposure to principles of triage, medical toxicology and pre-hospital care (EMS)
- To be aware of the ethical dilemmas of emergent care such as refusal of treatment, inability to consent and need for transfer to a higher level of service

Important aspects of this experience include:

- Ruling out most immediate life threats first (non-probabilistic thinking)
- Managing multiple patients in a time-efficient manner to the level of ability
- Performing supervised procedures: wound repair, splinting, fracture reduction, vascular access
- Perfecting focused problem-based histories, physical exams and oral presentations
- Making a concerted effort to utilize resources appropriately
- Collaborating with community physicians in the discharge planning and follow-up
- Gaining exposure to an Emergency Medicine residency training program within an academically productive department

Format: 1. Students are assigned 15 clinical shifts distributed over days, evenings and nights including two weekends and at least four night shifts. Students, while in the ED, are expected to see patients primarily and present directly to the Attending(s) or supervising PGY-3 Emergency Medicine Resident on duty. Students shall complete a hand-written note in the ED chart and place orders requiring immediate Attending verification. Students are expected to keep their patients, the ED care team and the patient’s Primary Care Provider updated on all results of therapies, tests, consults and disposition planning. There is an emphasis on patient education by students.
2. Students are required to attend a mandatory orientation session at the beginning of the month as well as an afternoon lecture series (held during the first week). In addition, students are required to attend relevant lectures as part of the Emergency Medicine
Residency didactics, held on Tuesday mornings. Schedules are provided during the mandatory orientation session on the first weekday of the month.

3. Additional experiences include a student at the end of the month on an EM-related topic, an EMS ride-along with a local paramedic crew, and participation in residency-related activities including journal club.

All students are expected to be present for the entire calendar month. Attendance at all didactic sessions is required. No credit shall be given for partial months unless previously approved by the course director.

***Students wishing to rotate during July-December, must have their request in at the beginning of April. For January-June rotations, forms must be submitted at least two months in advance or the rotation start date. Students may only drop the rotation if they find another student to take their place for that month. ***

Housing, within walking distance of the hospital is provided for all UVM students and extramural students on a first come, first serve basis.

**Evaluation Methods:**

A cumulative grade is determined by the Course Director upon collation of specific feedback from the Attending staff. Grades of Honors, Pass, Fail and Incomplete are given based upon a student’s attendance, clinical acumen and professionalism. Evaluation criteria include participation in case discussions and ride-along, quality of student presentation, and ability to render effective care while on duty.

An EM-Specific Standardized Letter of Recommendation (SLOR) may be requested from individual faculty members.

Advanced level requirements and credit are available for those who have already completed one month of clinical EM. Please discuss beforehand with the course director.
COURSE NO:  SURG1091
Title:  ER Away
Faculty:  ER staff at respective institution
Time Commitment:  1 month
Months Offered:  All
Enrollment:  Unlimited. **Students must complete an Extramural Application Form and submit it to the Office of Student Affairs.**
Visiting Students:  Not applicable

________________________________________________________________________________

**Course Description**

**Goals:**  
*See goals for SURG 9502 Emergency Room.*

**Format:**  
1. Students will fulfill the off-site requirements for clinical time and all other off-site requirements.
2. Students will complete all COMET modules in Emergency Medicine. If modules are not completed a grade of Incomplete will be assigned.

**Evaluation Methods:**  Students will be assigned the grade they are given clinically by the off-site faculty only after passing a final exam administered by UVM. The student is required to contact Brenda Barr in the Surgery Education Office, 802-847-3667 (email: brenda.barr@vtmednet.org) with a contact person who will proctor the exam. The exam can be taken as a secure exam on the student’s laptop (needs to be hard-wired, not wireless). This final exam is a one hour multiple choice format and is based on the COMET module learning objectives. You can also schedule the exam at FAHC on the last day of the month; contact Pam Perrotte.

**Requirements:**  Students must sign up for their required rotation with Student Affairs at least one-two months before. You also need to contact Brenda Barr in the Surgery Education Office (802-847-3667) **three weeks prior to the start of your away** rotation to obtain the information necessary to complete your ER rotation modules on Comet.
Course Description

Goals: The goal of this rotation is to apply concepts learned in pharmacology to clinical practice. We follow a didactic program that reviews the toxicity of a variety of common pharmaceutical agents. We discuss special populations including Pediatrics. Topics include toxic terrorism and Toxinology (natural toxins). The management of exposure to toxins is reviewed including decontamination.

Format: The rotation is based at the Northern New England Poison Center. Didactic sessions are tailored to supplement the reading. Rotators spend time with Poison Center staff receiving calls to the hotline and performing follow-ups. Call duties are optional for students working side-by-side with the Toxicologist during beside consults. A variety of special activities mean that no two months are the same. There is a tour of a hyperbaric facility.

Evaluation Methods: Performance is evaluated based strongly on participation and preparation for the small group discussions. There is no final exam. Rotators prepare mini-presentations on topics encountered throughout the month. Feedback is also solicited from Poison Center staff.
Goals: The goal of the rotation is to allow students an opportunity to receive an intensive four-week educational experience in Emergency Medicine (EM) research. The research topic will generally focus on clinically relevant projects that enhance or complement the student’s understanding of EM practice and research.

Objectives to be met include:
- Awareness of the ethical responsibilities of the EM physician researcher.
- Introductory exposure to scientific writing.
- Introductory experience in public speaking within a scientific forum.
- Awareness of the importance of evidence-based practice in the emergency setting.
- Awareness of the importance of interdisciplinary collaboration in clinical research.
- Develop fundamental behaviors of thoroughness, reliability, and efficiency that will aid in the student's experience as a physician and/or research associate.

Important aspects of this experience include:
- Exposure to an EM residency training program.
- Opportunities to experience one-on-one faculty teaching experience in clinical research.
- Collaboration with attending faculty.
- Opportunities for attending Maine Medical Center Research Institute (MMCRI) lecture series.
- Opportunities for attending Journal Club and MMCRI Research Seminars

Format: Students will be assigned a research project by the Research Director and/or EM faculty principal investigator. Expectations for the project period will be discussed on the student's first day of the rotation to supplement any discussion or planning prior to the onset of the rotation month.

Evaluation Methods: By the end of the month rotation, each student is required to provide a one page summary of their research project, written in abstract form: Title, author(s), background, objective, methods, results, and conclusions.

Each student is required to provide a three to four page technical summary of his or
her research project. This document should be written in manuscript format. Sections should include an abstract, introduction, methods, results, conclusions, and discussion.

- The purpose of this document is to give the student an introduction to scientific writing and to allow MMC EM faculty and staff to understand and review the accomplishments of the student.

- Each student is required to provide an informal presentation of his or her research project. Presentations will be scheduled with the Research Director during the last week of the student's rotation. This should be prepared with the assistance of the student's principal investigator and/or other members of the faculty.

- The purpose of this informal presentation is to give the student an introduction to public speaking in a scientific forum, as well as an opportunity for MMC EM faculty and staff to understand the accomplishments of each student.

- A cumulative grade is determined by the MMC course director. Grades of Honors, High Pass, Pass, Marginal Pass, Fail, and Incomplete are given based upon a student's attendance, professionalism, adherence to ethical standards, presentation, and writing assignments. An EM Standardized Letter of Recommendation (SLOR) may be requested from individual faculty members. Currently, no pre- or post-test is administered, however this is subject to change at the discretion of the EM Research Director.