WAKE FOREST UNIVERSITY SCHOOL OF MEDICINE 4TH YEAR PROGRAM GUIDE ~ 2009-2010

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FOREWORD TO YEAR 4 PROGRAM GUIDE

Year 4 Goal: to strengthen areas of weakness, explore possible specialty choices, enhance clinical acumen and develop skills that will make the student a better house officer and physician.

Year 4 consists of twelve, four-week periods. One four-week period may be taken for vacation; one four-week period **must** be taken to prepare for taking Step 2 Boards between rotations IV-1 and IV-4. The remaining ten four-week periods must have the following distribution:

1. Advanced Inpatient Management (AIM) – 2, four week rotations
2. Emergency Medicine – 1, four week rotation
3. Intensive Care – 1, four week rotation
4. Electives – 6, four week rotations

Rotation periods must be scheduled according to the “Guidelines for Rotations in Year 4”.

Most students will be interviewing for house officer positions during the fall of their fourth year. No more than 2 working days absence for planned activities such as interviews will be allowed during AIM, ICU, or Emergency Medicine rotations and those absences will be excused only if they are approved by the course director of that rotation at least 2 weeks prior to the start of the rotation. No more than 4 working days absence for planned activities will be allowed for all other rotations, and those absences will be excused only if they are approved by the course director of that rotation at least 48 hours prior to the planned absence. ***The student is responsible for checking with the individual rotation to assure that there are no other requirements for attendance.***

Use the online absence excuse request system.
Contact should be made with the Program Director at the earliest possible opportunity to request an excused absence. Note: the act of contacting the appropriate individuals in advance does not automatically guarantee that the absence will be considered "excused”.

In the event that the student and the Program Director are not able to agree on an acceptable conclusion related to the absence, the student may appeal the decision or the Clerkship Director may refer the decision to the Year 3/4 Administrative Team

Failure to participate in the minimum number of days/shifts of a Year 4 rotation will result in no credit being awarded to the student for that rotation.

Participation in the Clinical Practice Examination (CPX) is mandatory.

Research rotations are available in various departments. For a complete listing, please refer to the Non-Clinical section of this Program Guide.

GUIDELINES FOR ROTATIONS IN YEAR 4

For Students of

WAKE FOREST UNIVERSITY SCHOOL OF MEDICINE

The following guidelines were adopted by the Year 4 Subcommittee and approved by the Committee on Medical Education.

I. INTRAMURAL vs. EXTRAMURAL

A. **Intramural:** Intramural signifies rotations offered within the parent institution or affiliated hospitals within the city of Winston-Salem by faculty members of Wake Forest University School of Medicine. Also included in intramural rotations are those offered away from Winston-Salem that is given by clinical faculty in other locations. In essence, this means that all rotations included in the Program Guide are considered intramural.

B. **NC Exchange Program.** The University of North Carolina at Chapel Hill, Duke University at Durham, The Brody School of Medicine in Greenville, and Wake Forest University School of Medicine have agreed to take medical students from other North Carolina schools into their elective programs. All three schools will accommodate the medical student for a length of time to correspond with that student's academic calendar when possible. After the initial sign up of each school's own students for the elective programs for the academic year, other students will be accepted. No tuition will be charged to the visiting student. Each student will be responsible for his/her own housing facilities. These rotations must be arranged through the Wake Forest University School of Medicine, Office of Student Services. These electives are not considered to be extramural.

C. **Extramural:** Extramural electives are those which are arranged on an individual basis by the student with an institution or physician with the proper school approval. See item IV, section C for procedures to follow in arranging an extramural elective program. Students may take only two extramural electives (total of eight weeks).

- Extramural electives should be of four weeks duration with travel time included.

D. Electives must be completed within the allotted time block provided by Year 4.

II. APPROVAL OF ELECTIVE

All electives (intramural and extramural) must receive Dean's (or their designee) approval.

A Student's final Year 4 schedule will be reviewed and approved by the Associate or Assistant Dean for Student Services. Changes to the approved schedule must be made by meeting with the Academic Clerkship Coordinator and/or Registrar at least four weeks prior to the start of the rotation. Only changes considered necessary and/or imperative will be allowed less than 30 days in advance of the rotation. Such changes require a completed Drop/Add form signed by the course directors. This includes extramural rotations (See I-C).

Students not living at the address on file should notify the Office of Student Services of their current address.

III. STIPEND

A. Participation in an elective program is not to be construed as gainful employment.

B. Stipends may be provided but must not exceed those required for travel and/or necessary living expenses.

C. Elective opportunities provided by the military will have to be individually evaluated. If in keeping with military regulations, stipends may be allowed.

IV. GENERAL INFORMATION ON ARRANGING ELECTIVE PROGRAM

a) Consult faculty advisor to determine an overall plan for Year 4 that meets the student's career goal and enhances the student's general professional education.

b) Consult intramural elective listings, which already have Committee on Undergraduate Medical Education approval.

c) Investigate extramural possibilities. If an extramural elective is desired, obtain an application and course description from the Student Services office at the medical school where you desire to rotate. Please contact the WFUSM Student Services Office for instructions of approval and forms.

d) International Healthcare Rotation: Please refer to the International Healthcare elective and contact the Office of Student Services for instructions of approval and forms.

e) Notify the Office of Student Services of your current personal email address and emergency contact names and phone numbers.

f) Any questions concerning electives should be cleared through the Office of Student Services, (336) 716-4271.

NOTIFICATION OF EXTRAMURAL ROTATIONS MUST BE SUBMITTED FOR APPROVAL TO THE OFFICE OF STUDENT SERVICES AT LEAST FOUR WEEKS PRIOR TO THE START OF A ROTATION. This is necessary so that you can be withdrawn from a previously scheduled elective here, if necessary, before the preceptor is notified that you will be doing his/her rotation and make arrangements to accommodate you. Also, please remember that other schools schedule their own students before visitors, so plan accordingly.

VISITING STUDENTS

Definitions of a US and International Medical School Student

- **US Medical School Student:** A US medical school student is a student who attends medical school in the United States or its affiliates. This student may have citizenship in the United States or abroad and should apply as a US medical school student.

- **International Medical School Student:** An international medical student is a student who attends medical school outside the United States. This student may have citizenship in the United States or abroad and should apply as an international medical school student.

APPLICANT CATEGORY AND APPLICATION PROCESS - Wake Forest University School of Medicine has three application processes for visiting students: **Section I.** AAMC Visiting Student Application Service (VSAS), **Section II.** Doctor of Osteopathic Medicine (DO) and **Section III.** International Visiting Medical Students. Locate the category that best fits you as a visiting student and following the application process as described below.

I. **AAMC Visiting Student Application Service (VSAS) for Visiting US Medical School Students** - If you are currently enrolled as a final year medical student in a US medical school that is accredited by the LCME (Liaison Committee for Medical Education), you should apply through VSAS. WFUSM was 1 of 10 schools selected by the AAMC to participate as a host school in the pilot of VSAS.

Application Process for VSAS Applicants

A. Wake Forest students will be given priority in scheduling electives.

B. Further information will be released after March 15, 2008. Please visit our webpage at http://www1.wfubmc.edu/MDProgram/Year+IV+Guide for direction and updated information regarding VSAS.

C. To obtain further information regarding the Visiting Student Application Service, please visit their web page at www.aamc.org/programs/vsas

Notification of Approval of VSAS Applications

1) Further information will be released after March 15, 2008. Please visit our webpage at http://www1.wfubmc.edu/MDProgram/Year+IV+Guide frequently for updated information.

2) To obtain further information regarding VSAS, please visit their web page at www.aamc.org/programs/vsas

3) Scholarship Clerkship Program. Qualified participants will receive a stipend for housing and travel. To see if you qualify, please go to the following link: http://www1.wfubmc.edu/MDProgram/Student+Services/Diversity/Medical+Students/Scholarship+Clerkship/

4) Housing. The Office of Student Services maintains a list of housing available to visiting students. Names and telephone numbers of people with temporary accommodations are available by calling this office at (336) 716-4271.

5) Issuance of Badge. An ID badge will be issued to the visiting student after registering with the Office of Student Services on the first day of the rotation.

6) Parking. For an additional fee, student parking is available the same day your ID badge is issued.

IT IS THE STUDENT'S RESPONSIBILITY TO CHECK WITH THE PROGRAM DIRECTOR OF THE ELECTIVE TO FIND OUT WHAT TIME HE/SHE IS TO REPORT ON THE FIRST DAY, IF THIS IS NOT SPECIFIED ON YOUR APPROVED APPLICATION.

II. **Doctor of Osteopathic Medicine (DO) Visiting Students -** If you are currently enrolled as a final year student in an accredited Doctor of Osteopathic school, you should follow the application process as outlined below.

Application Process for DO Applicants

A. Wake Forest students will be given priority in scheduling electives

B. You may be eligible to complete up to one 4-week rotation at Wake Forest University School of Medicine.

C. Students will be accommodated for elective rotations whenever possible so long as space and faculty availability permit and the prerequisites for the electives are met, except where indicated differently in the Program Guide.

D. Please return all items in one packet to the Office of Student Services no less than 30 days prior to the start date of your desired rotation. These include payment of the $50.00 application fee (non-refundable), completing an application form provided by the Wake Forest University School of Medicine, securing the visiting student's medical school seal over the official signature on the form, providing health information requested (see item E below), and meeting the criteria set by each department for outside students. These criteria are printed at the beginning of each departmental elective listing.

E. Immunization Requirements: All visiting students are expected to show proof they are currently immunized against diphtheria, pertussis, tetanus, measles, mumps, rubella, and Hepatitis B. A form is provided.

F. Insurance: All visiting students must have health insurance and coverage for malpractice (minimum requirement $1,000,000/$3,000,000).

G. The following course codes in the Year 4 Program Guide are not available to visiting students: AIM101-356, CM01-24, FM03, FOR01-08, ICU01-07, IHC01, NCE22, OPH01, and REM01. Other courses may not be available to visiting students. This information can be found under the specific course description.

H. The Office of Student Services (OSS) will start receiving completed externship applications for academic calendar year 2009-2010 on April 1, 2009. Faxed applications will not be accepted. Processing of these applications begin mid-May and are presented to the Registrar for final approval/denial. Status letters are mailed in June to the applicant's address provided on the application. Applicants are asked not to call OSS prior to June 1st to inquire on the status of application.

We are unable to answer inquiries of course availability.

I. Applicants are instructed to give full dates (i.e. 11/01/09-11/31/09) of their desired rotation

Notification of Approval of DO Applicants

1) If approved, the student will be notified by letter with an attached copy of the application form indicating the date, time and place to report for their rotation.

2) Scholarship Clerkship Program. Qualified participants will receive a stipend for housing and travel. To see if you qualify, please go to the following link: http://www1.wfubmc.edu/MDProgram/Student+Services/Diversity/Medical+Students/Scholarship+Clerkship/

3) Housing. The Office of Student Services maintains a list of housing available to visiting students. Names and telephone numbers of people with temporary accommodations are available by calling this office at (336) 716-4271.

4) Issuance of Badge. An ID badge will be issued to the visiting student after registering with the Office of Student Services on the first day of the rotation.

5) Parking. For an additional fee, student parking is available the same day your ID badge is issued.

IT IS THE STUDENT'S RESPONSIBILITY TO CHECK WITH THE PROGRAM DIRECTOR OF THE ELECTIVE TO FIND OUT WHAT TIME HE/SHE IS TO REPORT ON THE FIRST DAY, IF THIS IS NOT SPECIFIED ON YOUR APPROVED APPLICATION.

III. **International Visiting Medical Students -** If you are a final year medical student currently enrolled in a foreign medical teaching institution, you should follow the application process outlined below.

Application Process for International Applicants

A. Wake Forest students will be given priority in scheduling electives.

B. You may be eligible to complete up to one 4-week rotation at Wake Forest University School of Medicine.

C. Students will be accommodated for elective rotations whenever possible so long as space and faculty availability permit and the prerequisites for the electives are met, except where indicated differently in the Program Guide.

D. Please return all items in one packet to the Office of Student Services no less than 90 days prior to the start date of your desired rotation. These include payment of the $50.00 application fee (non-refundable), completing an application form provided by the Wake Forest University School of Medicine, securing the visiting student's medical school seal over the official signature on the form, providing health information requested (see item E below), and meeting the criteria set by each department for outside students. These criteria are printed at the beginning of each departmental elective listing.

E. Immunization Requirements: All visiting students are expected to show proof they are currently immunized against diphtheria, pertussis, tetanus, measles, mumps, rubella, and Hepatitis B. A form is provided.

F. Insurance: All visiting students must have health insurance and coverage for malpractice (minimum requirement $1,000,000/$3,000,000). *Malpractice insurance should not be purchased prior to receiving approval from The Office of Student Services.*

G. Tuition will be charged to international students and this charge will be prorated based on the current tuition paid by a Wake Forest fourth year medical student. The current (academic year 2008-2009) tuition charge is $3825.00 (US dollars) per month of instruction which is due the first day of the rotation. The $50.00 application fee will be applied to the tuition for international students.

H. You must provide documentation (TOEFL certification or attestation of professor) proving your proficiency of the English language.

I. The following course codes in the Year 4 Program Guide are not available to visiting students: AIM101-356, CM01-24, FM03, FOR01-08, ICU01-07, IHC01, NCE22, OPH01, and REM01. Other courses may not be available to visiting students. This information can be found under the specific course description.

J. Applicants are instructed to give full dates (i.e. 11/01/09-11/31/09) of their desired rotation

K. The Office of Student Services (OSS) will start receiving completed externship applications for academic calendar year 2009-2010 on April 1, 2009. Faxed applications will not be accepted. Processing of these applications begin mid-May and are presented to the Registrar for final approval/denial. Status letters are mailed in June to the applicant's address provided on the application. Applicants are asked not to call OSS prior to June 1st to inquire on the status of application.

We are unable to answer inquiries of course availability.

L. Processing of international students' application may take up to three months.

Notification of Approval of International Applicants

1) If approved, the student will be notified by letter with an attached copy of the application form indicating the date, time and place to report for their rotation.

2) Housing. The Office of Student Services maintains a list of housing available to visiting students. Names and telephone numbers of people with temporary accommodations are available by calling this office at (336) 716-4271.

3) Tuition – School tuition in the amount of $3825.00 (US dollars) is due the first day of the rotation in the form of a money order or certified check made payable to WFUSM/Student Services.

4) Malpractice Insurance – If directed by the Registrar's office, upon arrival to WFUSM, the student must provide a certificate of malpractice insurance meeting or exceeding the school's minimum requirement of $1,000,000/$3,000,000.

5) Issuance of Badge. An ID badge will be issued to the visiting student after registering with the Office of Student Services on the first day of the rotation.

6) Parking. For an additional fee, student parking is available the same day your ID badge is issued.

IT IS THE STUDENT'S RESPONSIBILITY TO CHECK WITH THE PROGRAM DIRECTOR OF THE ELECTIVE TO FIND OUT WHAT TIME HE/SHE IS TO REPORT ON THE FIRST DAY, IF THIS IS NOT SPECIFIED ON YOUR APPROVED APPLICATION.

FOURTH YEAR
Academic Year 2009 – 2010
(Class of 2010)

Year 4 Orientation ..... Monday, April 20, 2009
Year 4-1 Begins ..... Tuesday, April 21, 2009
Clinical Performance Exam (CPX) Required ..... Monday May 11 through Wed., May 20, 2009
Year 4-1 Ends ..... Sunday, May 17, 2009 @ 5pm
Year 4-2 Begins ..... Monday, May 18, 2009
Holiday (Memorial Day) Begins ..... Friday, May 22, 2009 @ 5pm
Classes Resume ..... Tuesday, May 26, 2009 @ 7am
Year 4-2 Ends ..... Sunday, June 14, 2009 @ 5pm
Year 4-3 Begins ..... Monday, June 15, 2009
Holiday (Independence Day) Begins ..... Thursday, July 2, 2009 @ 5pm
Classes Resume ..... Monday, July 6, 2009 @ 7am
Year 4-3 Ends ..... Sunday, July 12, 2009 @ 5pm
Year 4-4 Begins ..... Monday, July 13, 2009
Year 4-4 Ends ..... Sunday, August 9, 2009 @ 5pm
Year 4-5 Begins ..... Monday, August 10, 2009
Year 4-5 Ends ..... Friday, September 4, 2009
Holiday (Labor Day) ..... Friday, Sept. 4, 2009 @ 5pm through Tuesday, Sept. 8, 2009 @ 7am
Year 4-6 Begins ..... Tuesday, September 8, 2009
Year 4-6 Ends ..... Sunday, October 4, 2009 @ 5pm
Alumni Weekend 2009 ..... October 2-4, 2009
Year 4-7 Begins ..... Monday, October 5, 2009
Medical Student Research Day ..... Wednesday, October 14, 2009
Year 4-7 Ends ..... Sunday, November 1, 2009 @ 5pm
Year 4-8 Begins ..... Monday, November 2, 2009
Year 4-8 Ends ..... Wednesday, November 25, 2009 @ 12 Noon
Thanksgiving Recess ..... Wednesday, Nov 25, 2009 @ 12 Noon through Monday Nov 30 @ 7am
Year 4-9 Begins ..... Monday, November 30, 2009
Holiday Recess ..... Monday December 21, 2009 through Monday, Jan 2, 2010 @ 7am
Year 4-9 Ends ..... Sunday, January 10, 2010
Year 4-10 Begins ..... Monday, January 11, 2010
Holiday (Martin Luther King, Jr) Begins ..... Friday, January 15, 2010 @ 5pm
Classes Resume ..... Tuesday, January 19, 2010 @ 7am
Year 4-10 Ends ..... Sunday, February 7, 2010 @ 5pm
Year 4-11 Begins ..... Monday, February 8, 2010
Year 4-11 Ends ..... Sunday, March 7, 2010 @ 5pm
Year 4-12 Begins ..... Monday, March 8, 2010
Match Day ..... Thursday, March 18, 2010
Year 4-12 Ends ..... Thursday, April 1, 2010
Holiday (Good Friday) Begins ..... Thursday, April 1, 2010 @ 5pm
Residency Preparation ..... Monday, April 5, 2010 through Sunday April 18, 2010
Senior Seminar ..... Monday, April 19, 2010 through Friday May 7, 2010
Graduation Week Preparation Time Begins ..... Monday, May 10, 2010
Awards Day ..... Friday, May 14, 2010
Hooding Ceremony ..... Sunday, May 16, 2010
Graduation ..... Monday, May 17, 2010

USMLE STEP 2 CK and Step 2 CS must be completed by Friday, September 4, 2009

ADVANCED INPATIENT MANAGEMENT (AIM)

All WFUSM students are required to complete two AIM rotations. These are selected from **two separate disciplines**. The disciplines are Surgery, Psychiatry, Family Medicine, Ob/Gyn, Internal Medicine, Neurology and Pediatrics.

Goal: Through exposure, supervision, and primary patient responsibility develop the student's abilities in complete patient management. The student will be actively involved in all aspects of patient care including primary work-up, development of differential diagnoses, in-hospital patient management and post-hospital care planning.

The goals and objectives for each AIM are listed within the course offering.

FAMILY MEDICINE

AIM50 Family Medicine

Program Director: C. Randall Clinch, DO, MS

The student will be assigned to the Family Medicine In-patient Service located at Wake Forest University Baptist Medical Center.

Objectives: Upon Completion of the acting internship the student will demonstrate:

1. Presence of acceptable fund of biomedical knowledge for the practice of clinical medicine
2. Ability to augment knowledge by using appropriate resources
3. Ability to take an accurate history and perform a reliable physical examination upon hospitalized and ambulatory patients
4. Ability to synthesize, interpret and integrate clinical data to form accurate and appropriate differential diagnoses and initiate logical plan of investigation and therapy for the majority of patients encountered
5. Understanding of the basic principles of longitudinal health care of the patient in context of family by including the impact of illness on patient and family when determining the differential diagnosis and management of a health problem.
6. Interest and effort in performing patient care-related procedures as opportunities arise (LP, ABG, thoracentesis, blood culture, etc.)
7. Understanding of the basic principles of health promotion and disease prevention and how these can be applied in an inpatient setting
8. Ability to interact with patients as a thoughtful, compassionate, professional caregiver
9. Ability to work effectively and supportively with all members of a health care team
10. Ability to communicate medical information accurately and appropriately to patients and colleagues
11. Evidence of sense of responsibility, integrity and ethical standards.

Methodologies:

1. The student will perform the initial evaluation (history and physical exam), generate a differential diagnosis, and initiate an appropriate diagnostic and therapeutic plan (with input and supervision of upper level residents and attendings) for a controlled and limited number of patients.
2. The student will be responsible for daily assessment of his/her patients, revision of diagnostic and therapeutic plans based on changing conditions, ongoing communication with supervising physicians/consultants/nursing staff and interaction with the patient's family members.
3. The student will be responsible for day-to-day care of assigned patients, including performance of needed procedures (with supervision by a licensed physician), documentation of medical care by progress notes, and other activities typically associated with internship.

4. The student will be an integral member of the inpatient team, including interns, upper level residents and attending physicians, who will provide appropriate supervision of the student, countersign written orders, and provide ongoing feedback regarding clinical skills and abilities of the student, appropriateness and thoroughness of care, ability to review and incorporate information from the medical literature, and guidance regarding continued enhancement of clinical performance. Feedback will also be ongoing regarding the student's medical fund of knowledge and professionalism.

Call will be once a week, primarily from home. Week-end rounding duties will be determined by the team as appropriate to the intern schedule.

Length of Program: 4 weeks
Maximum Number of Students: 1 student for rotations 1, 11 and 12; 2 students for rotations 2 & 3.
Report To: Contact Karen Vaden at (336)716-9560 or by email kvaden@wfubmc.edu one week prior to the start of the rotation

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INTERNAL MEDICINE

AIM100 Internal Medicine

101 General Internal Medicine A
102 General Internal Medicine B
103 General Internal Medicine C
104 General Internal Medicine D
105 Wake Forest Inpatient Physicians (WFIP)
(previously known as General Internal Medicine E)
106 Hematology/Oncology A
108 Leukemia
109 Nephrology
111 Acute Care of the Elderly (ACE Unit – Sticht Center)

Program Director: Cynthia A. Burns, M.D.

Program Goal: By the end of the rotation, students should be able to demonstrate:
1. Presence of acceptable fund of biomedical knowledge for the practice of clinical medicine
2. Ability to augment knowledge by using appropriate resources
3. Ability to take an accurate history and perform a reliable physical examination
4. Ability to synthesize, interpret and integrate clinical data to form accurate and appropriate differential diagnoses and initiate logical plan of investigation and therapy for majority of patients encountered
5. Interest and effort in performing patient care-related procedures as opportunities arise (LP, ABG, thoracentesis, blood culture, etc.)
6. Ability to interact with patients as a thoughtful, compassionate, professional caregiver
7. Ability to work effectively and supportively with all members of a health care team
8. Ability to communicate medical information accurately and appropriately to patients and colleagues
9. Evidence of sense of responsibility, integrity and ethical standards.

Methodologies:
5. The student will perform the initial evaluation (history and physical exam), generate a differential diagnosis, and initiate an appropriate diagnostic and therapeutic plan (with input and supervision of upper level residents and attendings) for a controlled and limited number of patients.
6. The student will be responsible for daily assessment of his/her patients, revision of diagnostic and therapeutic plans based on changing conditions, ongoing communication with supervising physicians/consultants/nursing staff and interaction with the patient's family members.
7. The student will be responsible for day-to-day care of assigned patients, including performance of needed procedures (with supervision by a licensed physician), documentation of medical care by progress notes, and all other activities associated with internship.
8. The student will be an integral member of a ward team, including an upper level resident and attending physician, who will provide appropriate supervision of the student, countersign written orders, and provide ongoing feedback regarding clinical skills and abilities of the student, appropriateness and thoroughness of care, and guidance regarding continued enhancement of clinical performance). Feedback will also be ongoing regarding the student's medical fund of knowledge and professionalism.

Prerequisites: Completion of Years 1-3
Length of Program: 4 weeks (rotation ends on the Sunday of the 4th week)
Maximum Number of Students: 1 per rotation except AIM105 which will accept 3 per rotation
When Offered: All Rotations
Report To: Upper level resident for each service

NEUROLOGY

AIM150 Physical Medicine and Rehabilitation

Program Director: Megan Lovorn, M.D. and Martin Childers, D.O., Ph.D.

Program Goal: This rotation allows students with an appropriate level of supervision, to take on a high level of medical responsibility and manage patients with sub-acute and chronic neurological and musculoskeletal conditions in an inpatient rehabilitation setting. Student is supervised by Physical Medicine and Rehabilitation attending physicians. The student will be expected to present his/her patients together with a management plan to the supervising physician on a daily basis. Daily rounds with the attending will require that the student be knowledgeable about all aspects of patient, neurological, medical and rehabilitative care. In addition to daily weekday rounds, the students will be expect to be “on call” (assist the attending on call) for approximately one weekend per rotation. The rotation is ideal for students wishing to improve their skills in neurological diagnosis, management of neurological and neuromuscular conditions, rehabilitative care, musculoskeletal examination techniques, and general medical problems related to an inpatient service. The course will allow the student to work with patients with stroke, spinal cord injuries, traumatic brain injuries, brain tumors, multiple sclerosis, amputations, and other disabling conditions. The course also offers the students an opportunity to learn a practical low back and neck evaluation and how to treat common musculoskeletal injuries. There is an excellent opportunity to learn how to work with a multidisciplinary team in the care of patients. While the rotation is primarily inpatient, students have the opportunity to participate in clinics, attend therapies with patients, and observe pain management in an outpatient setting if requested by the student.

The student will also be asked to attend weekly lectures on relevant topics on neurorehabilitation and a wide variety of orthopedics disorders.

By the end of the rotation, student should be able to:

1) Discuss the clinical presentation of common neurological diseases and musculoskeletal conditions requiring inpatient rehabilitation.
2) Demonstrate competence in prevention of secondary medical complications in this population including DVT, pressure sore, spasticity, urinary tract infection, contractures and other musculoskeletal conditions.
3) Demonstrate competence in managing day-to-day medical care in a rehabilitative setting including synthesizing, interpreting and integrating clinical data to initiate and undertake an appropriate rehabilitative plan.
4) Demonstrate ability to interact with patients who have suffered a recent major disability and educate the patient and the family members to make adjustments after discharge.
5) Interact with the members of the rehabilitation team including nursing, physical therapy, occupational therapy, speech and language pathology, psychology, recreational therapy, social services and others.
6) Participate in patient education regarding methods of mobility, methods to perform activities of daily living, bowel/bladder management and, sexuality issues.
7) Acquire a basic understanding of wheelchairs, assistive devices for ambulation and other adaptive equipment.

Methodologies: the student will

1) Perform the initial evaluation (H&P) on new hospital admissions to the Rehabilitation Service and generate a medical and rehabilitation treatment plan under the input and supervision of the attending physician.
2) Be responsible for the daily assessment and management of his/her patient, including appropriate diagnostic and consultative evaluations, prescription of appropriate medications and other treatments, and with revision of treatment plans as appropriate.
3) Be responsible for daily progress notes and other appropriate documentation of medical care, as well as all other activities generally associated with an internship

4) Be expected to interact with all members of the Rehabilitation team.
5) Be expected to participate in weekly interdisciplinary conferences and weekly family conferences related to his/her patients.
6) Be expected to provide medical guidance to other members of the rehabilitation team, and assist in the education of the team members, patients and families regarding aspects of rehabilitation care.

Evaluation: Students will be evaluated regarding the level of patient care provided, medical knowledge, practice-based learning and improvement, interpersonal and communication skills, professionalism and systems-based practice. There will be a written evaluation at the end of the rotation

Length of Program: 4 weeks
Maximum Number of Students: 2 per rotation
When Offered: All rotations
Report to: Call Donna Phoenix (secretary of Dr. Lovorn) at 713-8600 for instructions and orientations

OBSTETRICS & GYNECOLOGY

AIM200 Gynecologic Oncology - North Carolina Baptist Hospital

Program Director: Brigitte Miller, M.D.

Objectives: The purpose of this rotation is to give the students an opportunity to gain further experience with gynecologic malignancies and complicated gynecologic surgical problems. At the completion of the Gynecologic Oncology one-month elective, students should be able to:

1. Recognize and discuss common signs and symptoms of the major gynecologic neoplasms (carcinoma of the vulva, uterine cervix, uterine corpus and ovary).
2. Outline and discuss initial evaluation of the major gynecologic malignancies.
3. Understand and discuss general treatment concepts including surgery, radiation therapy and chemotherapy for the major gynecologic malignancies.

Program Outline: Students assigned to the Oncology rotation will be expected to do admission histories and physicals on patients admitted to their service on an elective and emergency basis and participate in their preoperative, surgical and postoperative care. The student will function as an Acting Intern but is not required to take call.

Conferences:

Monday	7-9:00 am	Resident Conference – Grand Rounds
Wednesday	7-8:00 am	GYN/GYN Oncology Conference
Friday	8:00-9:00 am	Patient Management, Gynecologic Oncology Topics

Ambulatory Clinic:

Monday	9:00 am – 12:00 pm and 1:00-5:00 pm
Friday	9:00 am – 12:00 pm

Rounds: Daily as specified by residents
Clinics: As directed by Gynecologic Oncology staff and residents.
Prerequisites: Completion of Year 3
Length of Program: 4 weeks
Maximum Number of Students: 1 per rotation
When Offered: All rotations
Report To: Students should page the Gynecologic Oncology Chief Resident at NCBH at 8:00 a.m. on the first day of the rotation.

AIM201 High Risk Obstetrics

Program Director: Heather Mertz, M.D. and Leslie Kammire, M.D.

Program Goal: The student completing this rotation will gain experience in the management of complicated pregnancies both in the outpatient and inpatient setting. By the end of the rotation, the student should have a working knowledge of:

- criteria to hospitalize and manage a complicated antepartum patient
- inpatient management of complicated pregnancy
- Use of ultrasound in the management of complicated pregnancy and fetal anomalies
- Genetic counseling and counseling for prenatal diagnosis

Methodologies: Students will attend the following:

- High risk Obstetric rounds Monday through Friday, and follow the care of 2 to 3 patients at a time
- Labor and Delivery coverage on Monday afternoon

- OBG Resident conference and Grand Rounds on Monday morning from 7 to 9 AM
- Genetic counseling sessions at Comprehensive Fetal Care Center (CFCC) on Tuesday AM
- Obstetric ultrasounds - Tuesday PM
- Resident OB conference - Weds AM
- Fetal echo clinic at CFCC - Weds PM
- Diabetes Clinic at DHP - Thurs AM
- Prenatal diagnosis conference - Thurs PM
- Inpatient ultrasounds at Prenatal Assessment Center at FMH - Thurs PM
- Consult Clinic at CFCC - Friday AM

Length of Program: 4 weeks
Maximum number of students per rotation: 1
When offered: All rotations
Report to: High Risk Chief Resident at 7 AM on first day of rotation

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PEDIATRICS

AIM250 Pediatric Hematology/Oncology

Program Director: Marcia Wofford, M.D.

Program Goal: The student will develop skills in providing care for children and adolescents diagnosed with cancer or hematologic diseases. The performance of these activities will be supervised by members of the Division of Pediatric Hematology-Oncology in the Department of Pediatrics. Experience will be gained in obtaining historical information and in performing physical examinations upon children with hematologic or oncologic problems as well as order writing and clinical documentation in the medical record. Students will be involved in discussions with the patient and family regarding diagnosis, treatment and prognosis and will experience the multidisciplinary team approach to management of children with chronic illnesses. Students will have the opportunity to learn techniques for accessing internal central venous access devices, performing lumbar punctures and bone marrow aspirates. Call will be every 4th night with a Pediatric intern and 2nd or 3rd year resident.

Maximum Number of Students: 1 per rotation
When Offered: All Rotations
Report To: Dr. Wofford at 7:30 am, 9th Floor, Brenner Children's Hospital

AIM251 Pediatrics, Brenner Children's Hospital

Program Director: Marcia Wofford, M.D.

Program Goal: The student will be responsible for the care of children and adolescents admitted to the Inpatient Service at Brenner Children's Hospital. A wide variety of general and subspecialty problems will be seen. Supervision will be by pediatric residents, general and subspecialty attending faculty and the department chairman, Dr. Abramson. Students will attend daily rounds and conferences. Other required conferences include Grand Rounds, Pediatric X-ray Conference, House staff Conference or Journal Club and Pathology Conference. Call will be every 4th night with a Pediatric Intern and 2nd or 3rd year Pediatric Resident.

Methodologies: The student will learn to care for children and adolescents admitted to the hospital, including:

1. Approach to the diagnosis and management of patients with common and unusual problems;
2. Supportive care and education of the child and family members;
3. Functioning as a member of multidisciplinary team caring for such patients;
4. Management of such patients in a cost-effective manner;
5. Taking part in discharge planning;
6. Involvement in the entire process from referral for admission to discharge.

Length of Program: 4 weeks
Maximum Number of Students: 2 per rotation
When Offered: All Rotations
Report To: Conference Room 2, 11th Floor, Brenner Children's Hospital, 8:00 am

AIM252 Newborn Pediatrics, Forsyth Medical Center

Program Director: Robert Dillard, M.D.

Program Goal: The student will develop skills in providing medical care for newborn infants in the Neonatal Intensive Care Unit of Forsyth Medical Center. The performance of these activities will be supervised by a member of the Division of Neonatology in the Department of Pediatrics, or a pediatric resident. An important part of the program is the experience gained with resuscitation of newborn infants after delivery. Further experience will be gained in obtaining historical information and in performing physical examinations upon infants with significant neonatal illnesses. The student will learn techniques of day-to-day management of infants with a variety of illnesses as well as those who are convalescing from such illnesses. Extensive experience will be gained in neonatal nutrition with emphasis on breastfeeding. Under supervision, the student will develop skills in writing orders, interpreting neonatal x-rays and performing procedures. Finally, the student will be responsible for presenting a seminar on a topic related to neonatal care.

Methodologies:
Resuscitation: Understand how to resuscitate and stabilize infants in the delivery area.
Stabilization of the Seriously Ill Infant: Understand the initial management of the critically ill infant.
Common Signs and Symptoms: Understand how to evaluate and manage common signs and symptoms of disease in high-risk newborns.
Common Conditions: Understand how to manage, under the supervision of a neonatologist, common diagnoses in infants in a community hospital nursery.
Diagnostic Testing: Understand how to use and interpret laboratory and imaging studies unique to the NICU setting.
Management and Decision-Making: Develop a logical and effective approach to the assessment and daily management of neonates in a community hospital setting.
Medical Records: Understand how to maintain accurate, timely and legally appropriate medical records in the NICU setting.

Prerequisites: Written permission from Dr. Robert Dillard.
Length of Program: 4 weeks
Maximum Number of Students: 2 per rotation
When Offered: All Rotations
Report To: Forsyth Medical Center Neonatal Intensive Care Unit, 3rd Floor North Tower at 8:00 a.m.

PSYCHIATRY

AIM300 Child and Adolescent Psychiatry

Program Director: Guy Palmes, M.D.

Program Goal: Acquire and/or consolidate knowledge and skills necessary to coordinate treatment for child and adolescent psychiatric inpatients.

Methodologies:

1. Under direct supervision of an attending psychiatrist, manage the care of up to 6 child/adolescent psychiatric patients concurrently, including:
   a. completing Admission Assessments (chief complaint, history of present illness, past medical and psychiatric history, family history, social history, review of systems, mental status examination, physical examination, initial diagnoses, and initial treatment plan).
   b. conducting a thorough psychiatric interview of patients assigned including their history and mental status examination
   c. conducting a complete physical examination
   d. ordering appropriate diagnostic tests (lab test, imaging, ECG, etc.)
   e. writing orders for medications
   f. participating in family assessments and communicating with family members
   g. assessing patients daily progress and recording daily progress notes
   h. ordering appropriate consultations
   i. coordinating discharge planning
   j. completing discharge prescriptions for co-signature
   k. dictating and editing discharge summaries
2. Gain knowledge about the indications, therapeutic effects, and side-effects of medications commonly used in child and adolescent psychiatry
3. Gain knowledge and skills in therapeutic interactions with patients by participating in individual and group psychotherapy.
4. Communicate effectively with all members of the Multi-disciplinary Team and participate actively in Team Meetings to provide well coordinated patient care.
5. Understand the legal requirements involved in voluntary psychiatric admissions and involuntary commitment
6. Become familiar with common assessment instruments and rating scales, and administer them when indicated
7. Utilize the hospital-based computer system to track diagnostic test results and reports
8. When possible, attend child and adolescent educational activities e.g. lectures, conferences, and Grand Rounds.

Length of Program: 4 weeks
Maximum Number of Students: 2 students per rotation
When Offered: All Rotations
Report To: Pediatric Behavioral Health Unit, Ardmore 10 at 8:30

AIM301 Adult Psychiatry

Program Director: Stephen I. Kramer, M.D.

Program Goal: To acquire and/or consolidate knowledge and skills necessary to coordinate treatment for adult psychiatric inpatients.

Methodologies:

1. Under direct supervision of an attending psychiatrist, manage the care of 2-3 adult psychiatric patients concurrently, including:
   a. completing the physician sections of the Multi-disciplinary Admission Form (chief complaint, history of present illness, past medical and psychiatric history, family history, social history, review of systems, mental status examination, physical examination, initial diagnoses and initial treatment plan
   b. conducting a thorough psychiatric interview of patients assigned including their history and mental status examination
   c. conducting a complete physical examination
   d. ordering appropriate diagnostic tests (lab test, imaging, ECG, etc.)
   e. writing orders for patient care, including medications
   f. participating in family assessments and communicating with family members, assessing patient's daily progress and recording daily progress notes
   g. ordering appropriate consultations
   h. coordinating discharge planning
   i. completing discharge prescriptions for co-signature
   j. dictating and editing discharge summaries.
2. Gain knowledge about the indications, therapeutic effects and adverse effects of medications commonly used in psychiatry.
3. Gain knowledge about the nature of therapeutic interactions with patients and the role of individual, group, family and milieu therapy.
4. Communicate effectively with all members of the multi-disciplinary team and participate actively in Team Meetings to provide well-coordinated patient care.
5. Gain experience in the assessment of psychiatric emergencies by participating (in tandem with an upper level resident) in 4 'on-call' nights.
6. Understand the legal requirements involved in voluntary psychiatric admissions, involuntary commitment, forced medications, informed consent, and treatment referral.
7. Become familiar with common bedside assessment instruments and rating scales, and administer them when indicated.
8. Utilize the hospital-based computer system to track diagnostic test results and reports.
9. When possible, attend departmental educational activities intended for HO-I level residents, e.g. lectures, conferences and Grand Rounds.

Length of Program: 4 weeks
Maximum Number of Students: 2 per rotation (1 acting intern for each team)
When Offered: All Rotations
Report To: Department will give instructions

SURGERY

AIM350 Cardiothoracic Surgery

Program Director: John Hammon, M.D.

Program Goal: The advanced in-patient management rotation on Cardiothoracic Surgery is designed to prepare a medical student for house staff training in the general area of management of the cardiac and pulmonary subsystems. This should help the student acquire a stronger feeling of confidence and responsibility, a greater ability to deliver competent medical care, and considerably improve skill in communicating with and gaining the cooperation of your patients, their families and fellow members of the health care team.

Methodologies: The objectives of this program are to learn and manage the care of patients with considerable levels of illness relating to their cardiac and pulmonary subsystems. Specific objectives include:

Manage several sick inpatients concurrently, including:
1. Initiated admission work-up
2. Order appropriate diagnostic tests
3. Perform differential diagnosis
4. Develop a treatment plan
5. Monitor treatment progress
6. Discern need for consults
7. Determine release from hospital
8. Prescribe appropriate follow-up care and preventive measures

Go to the operating room environment and participate in patient's operative care including:
1. Participate in selecting the appropriate anesthetic management
2. Sterilely prepare the patient's operative site for surgical treatment
3. Assist in opening the wound and performing the patient's operation
4. Assist with and help perform surgical wound closure
5. Appropriately dress the wounds and administer postoperative care

Prerequisites: Completion of Years 1-3
Length of Program: 4 weeks
Maximum Number of Students: 1 per rotation
When Offered: All Rotations
Report To: Call program director at 716-2124 for instructions (5th Floor, Watlington Hall)

351 Neurosurgery

Program Director: Thomas L. Ellis, M.D.

Program Goal: The objective of this required elective is to give the student an overall exposure to neurosurgery as a part of the patient care team. He/she will have the opportunity to study certain interesting patients in detail. He/she will function as "acting intern" with responsibility at all levels from the ER to the operating room. He/she will have contact with a wide spectrum of organic neurological disorders.

Methodologies: Exposure to the neurosurgical clinical experience.
Prerequisites: Completion of Years I-III
Length of Program: 4 weeks
Maximum Number of Students: 2 per rotation
When Offered: All Rotations

Report To: Chief Resident @ 6:00 am in the Dept of Neurosurgery, 5th Floor, Watlington Hall

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AIM352 Orthopaedic Surgery

Program Director: Ethan R. Wiesler, M.D.

Program Goal: This rotation is for fourth year students interested in gaining significant experience in the field of Orthopaedic Surgery. During the rotation, the student will serve two 2-week assignments on the following services: trauma/foot and ankle; hand/pediatrics; sports/joints/spine/oncology. The students will take call 5-6 times/month, which includes no more than 2 weekends. Exposure to all aspects of clinical orthopaedics including the operating room, out-patient clinics, in-patient care and the emergency room. In addition, students will attend clinic once weekly.

Methodologies: To acquaint the student with:

1. The scope and character of the practice of orthopaedic surgery
2. The specific encountered diseases and types of surgery performed in the various sub-specialty areas of orthopaedic surgery;
3. Techniques in the care of fractures with emphasis on the use of internal and external fixation as well as the selective use of casting and traction
4. The scope and character of the practice of orthopaedic surgery with particular emphasis on the care of trauma patients, and to provide an opportunity for exposure to training in adult inpatient and outpatient settings.

Prerequisites: Completion of Years 1-3
Length of Program: 4 weeks
Maximum Number of Students: rotation 1 - 7 (4/22-10/31/08) - 4 students per rotation
rotation 8 -12 (11/3/08-4/3/09) - 1 student per rotation

When Offered: All Rotations (vacation is discouraged during this rotation)
Report to: Administrative Chief Resident at 5:45 am in the study area on Fourth Floor, Watlington Hall who will aid the student in choosing a faculty advisor.

AIM353 Otolaryngology

Program Director: J. Dale Browne, M.D.

Program Outline: The objective of this elective is to give the student an opportunity to gain a more in depth clinical experience in all Years of Otolaryngology, including otology, head and neck oncology, paranasal sinus disease, laryngology and pediatric otolaryngology. The student will work with the attending and house staff in the outpatient clinic, operating room, emergency room, and hearing and speech clinic. The student will also actively participate in the care of patients hospitalized on the Otolaryngology Service.

Objectives: As outlined above.

Prerequisites: Year 3
Length of Program: 4 weeks
Maximum Number of Students: 2 per rotation
When Offered: All Rotations
Report To: The Department of Otolaryngology, 4th Floor, Watlington Hall, at 8:30 am

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AIM354 Plastic Surgery

Program Director: Lisa R. David, M.D.

Program Goal: This program is structured and designed to provide the senior medical student who has an interest in plastic surgery and has demonstrated the ability, an opportunity to serve as a supervised house officer. He/she functions and rotates as a junior intern on the Plastic Surgery service.

Methodologies: Extensive and advanced training in the evaluation and treatment of plastic surgery patients.

Prerequisites: Completion of Years 1-3
Length of Program: 4 weeks
Maximum Number of Students: 3 per rotation
When Offered: All Rotations
Report To: Call the residency coordinator (336-713-4372) prior to rotation to find out when and where to meet.

AIM355 Urology

Program Director: John J. Smith III, M.D.

Program Goal: This is offered for senior students seeking an in-depth exposure to the surgical sub-specialty of Urology. The senior student will serve on the Urology service actively participating in all Years of urologic diagnostic evaluation, surgery and departmental conferences. Accommodation can be made for those students with special interest areas in Urology (Urologic Oncology, Pediatric Urology, Stone Disease, Male Sexual Dysfunction, etc.). Those students with an interest in participating in an ongoing research program within the Section of Urology should refer to SGS13 – Research.

Methodologies:
Adult Urology: The student electively rotating on the Adult Urology service should acquire sufficient skills to appropriately evaluate the adult patient with hematuria, urinary outlet obstruction, and urinary tract infection.
Pediatric Urology: The student electively rotating on Pediatric Urology Service should acquire sufficient skills to appropriately evaluate the pediatric patient with urinary tract infection, voiding dysfunction, in addition to becoming familiar with those congenital anomalies common to Pediatric Urology.

On completion of this rotation the student will be:

1. Able to take a detailed urologic history and perform a basic urologic examination.
2. Able to organize complicated clinical information for analysis.
3. Able to recommend the appropriate laboratory and uroradiographic studies indicated to confirm a diagnosis and to recommend appropriate management and treatment plans for patients in management of cardinal problems in Urology:
   a. Urinary tract infection
   b. Hematuria
   c. Obstructive uropathy
   d. Urinary calculus disease
   e. Pediatric urologic issues
   f. Urinary incontinence
4. Able to recognize those urologic problems that should be manageable at a primary care level and differentiate those issues from that which should be referred to a urologist.
5. Exposed to fundamentals of urologic surgery including:
   a. Endoscopy
   b. Endourology
   c. Open-surgical procedures
   d. Pediatric Urology
   e. Laparoscopic/Robotic procedures

Prerequisites: Years 1-3; students must obtain permission from Dr. Smith to do the rotation.
Length of Program: 4 weeks
Maximum Number of Students: 1 per rotation
When Offered: All Rotations
Report To: The student should contact the chief urology resident on call on the Saturday or Sunday prior to starting their rotation to obtain instructions for commencing the elective on the following Monday.

AIM356 Congenital Heart Surgery

Program Director: Michael H. Hines, M.D.

Program Goal: Designed for the student who has a specific interest in learning more about the diagnosis and correction of congenital heart disease, primarily in infants and children, but including adults. Activities will include exposure to all aspects of surgical management including preoperative assessment, operative correction and palliation, postoperative intensive care management, and clinic follow-up. Educational opportunities also include daily rounds, weekly clinic, as well as weekly departmental conference and pediatric cardiac cath conference. Additional opportunities are available for exposure in the echo and cath lab, particularly as their assigned patients are evaluated. The experience can be additionally focused based on the student's career goals in surgery or pediatrics, prioritizing OR and PICU experience appropriately. The student's additional responsibilities will involve following assigned patients through their hospital course, working closely with the attending and pediatric cardiac surgery nurse practitioner, patient assessment, writing daily notes, pulling drains and pacer wires, discharge planning and daily presentation of the patient on rounds.

Objectives: To enhance the understanding of the embryology, structure and function of the congenitally malformed heart, and provide extensive exposure to the surgical management of these defects.

Prerequisites: Successful Completion of Year 3, Prior Approval of Course Director (716-2281, mhines@wfubmc.edu)
Length of Program: 4 weeks
Maximum Number of Students: 1 per rotation
When Offered: All Rotations
Report To: To be arranged with Course Director

AIM357 Burn Surgery

Program Director: James H. Holmes, M.D.

Program Outline: The student will be assigned to the Burn service under the supervision of the attending physician and house officers on that service. This program is designed to permit the student an increasing amount of responsibility in patient care and ward responsibility. The student is encouraged to pursue in depth areas of Burn Surgery & Surgical Critical Care that are of interest to her/him. Individual discussions are held daily with the student. The student will also attend BICU and ward rounds, Wound Rounds, the weekly Burn Team Multidisciplinary Conference, Burn Clinic and operative procedures with the attending physician and the house officers. Didactically, the student will attend weekly Surgery Grand Rounds and the Surgery Resident Didactic Conference. The student will present and discuss a burn-related topic of interest to him/her on the final Tuesday or Thursday of the rotation. Time expectations will mirror those of the residents on the Burn Service 0530 to ~ 1800 M-F with home call for major burns requiring formal resuscitation M-F, Sat 0530 to ~0930, & off remainder of Sat & all day Sun (<80 hr/wk, averaged over 4 weeks).

Objectives: Upon completion of this clerkship, the student will be able to:

1. Determine the severity of a given thermal injury; perform an appropriate, thorough physical examination; suggest appropriate laboratory studies to confirm or rule out an associated diagnosis; and recommend appropriate treatment and management plans;
2. Defend patient management plans which s/he has recommended.
3. Demonstrate a professional demeanor when interacting with patients and families.

Prerequisites: Completion of Year 3
Length of Program: 4 weeks
Maximum Number of Students: No more than one per rotation
When Offered: All Rotations
Report To: James H. Holmes IV, M.D.

REQUIRED EMERGENCY MEDICINE

All Wake Forest University School of Medicine students are required to satisfactorily complete one, four-week Emergency Medicine rotation before graduation. This requirement can only be fulfilled by the rotation listed below.

REM01 Emergency Medicine

Program Director: David E Manthey, M.D., FACEP, FAAEM

Program Outline: To fulfill the Emergency Medicine requirement, students must complete four weeks in Emergency Medicine at Wake Forest University Baptist Medical Center. Students will function as the primary health care provider for all patients they encounter and coordinate all of their care. They will be under the direct supervision of an EM attending physician or senior resident. Students will work, on average, 16 eight-hour shifts and two full weekends during the four weeks. Approximately 18 interactive case-study presentations will be presented by an attending physician at pre-designated times during the rotation (set curriculum rotates each month). The student will have access to all lectures, handouts, and required reading on e-wake. Separate self-study packets are included in the required assignments. Attendance at the lectures is required. Students will present a fifteen-minute case and discussion at the end of the rotation. EMS (ambulance) experience, patient simulation, cadaver lab and procedures are mandatory parts of the rotation. Students will be required to pass an examination that covers basic topics in emergency medicine.

Objectives:

1) Patient Care
   a) Interviewing techniques
   b) Directed physical examination
   c) Developing a differential diagnosis
   d) Initiate resuscitation and stabilization
   e) Procedural and wound care
   f) Proper disposition and follow-up
2) Medical Knowledge
   a) Identification of acutely ill patient
   b) Developing an evaluation plan
   c) Test interpretation
   d) Developing a therapeutic plan
   e) Treatment of common acute problems
3) Practice Based Learning and Improvement
   a) Self directed learning project
   b) Use of information technology
   c) Evaluation of literature
4) Interpersonal & Communications Skills
   a) Establishing rapport
   b) Effective presentation
   c) Interaction with consultants
5) Professionalism
   a) Respect
   b) Ethical behavior
   c) Sensitivity to cultural issues
6) Systems Based Practice
   a) Assessment of undifferentiated patient
   b) Appropriate referral
   c) Primary care for the uninsured and those without PCPs

d) Understanding of emergency procedures

Scheduling: All schedule requests for REM01 must be submitted to Tracie Goldsmith (tgoldsm@wfubmc.edu) in Emergency Medicine by the Monday **two weeks** before the start of the rotation. Requests received after that time will not be accepted. Please note that the rotation goes through 6pm on the last Sunday of the rotation period. Special circumstances such as presenting at national meetings should be discussed with David Manthey, M.D. (dmanthey@wfubmc.edu) at the earliest possible time.

Drop/Add: Must be completed more than four weeks before the start of the rotation. If request occurs in the four weeks before the rotation, discussion with the Academic Clerkship Coordinator and/or Registrar as well as Dean's must occur.
Prerequisites: All Year 3 requirements have been fulfilled
Length of Program: 4 weeks
Maximum Number of Students: 10 total per rotation period.
When Offered: All Rotations
Report To: The assigned meeting room (info. listed on e-wake) at **8:00 am sharp** on the first day of rotation for orientation.

REQUIRED INTENSIVE CARE

All Wake Forest University School of Medicine students are required to satisfactorily complete one, four-week Intensive Care (ICU) rotation before graduation. This requirement can only be fulfilled by completing one of the rotations listed below. The goals and objectives for each ICU are listed within the course offering.

ICU01 Medical Intensive Care Unit

Program Director: Cynthia A. Burns, M.D.

Program Outline: The objective of this clerkship is to expose students to patient care in the Intensive Care setting, with emphasis on patient management issues, such as differential diagnosis, rational laboratory and radiologic testing, acute and chronic management of patients with multiple medical and surgical problems. Issues such as ventilator management, acute pharmacologic therapy for hemodynamic instability, effective antimicrobial therapy, nutritional support, and multisystem dysfunction will be addressed. Students will participate as an integral part of the intensive care team, in the Medical Intensive Care Unit (MICU). Students will assume supervised responsibility for patient admission, evaluation, diagnostic testing, initiation and evaluation of therapy, and be exposed to patient-care issues such as End of Life decisions, patient disposition, and family health care dynamics. Responsibility for supervision of students will lie with the upper level house staff and faculty. Attendance at the daily Intensive Care lecture series, given by faculty members from the Critical Care Section of the Department of Anesthesiology is expected.

Students will be exposed to and have the opportunity to care for patients with a wide variety of life-threatening illnesses, for example: septic shock, respiratory failure, cardiogenic shock, drug overdose, gastrointestinal bleeding, necrotizing pancreatitis, coma, and disseminated intravascular coagulopathy.

Students will be exposed to and have the opportunity to observe/participate in/perform a variety of procedures, such as arterial line placement, central line placement, hemodialysis catheter placement, PA catheter placement, endotracheal intubation, thoracentesis, paracentesis, lumbar puncture.

Students may also spend time in the Patient Simulation Laboratory (PSL), where they will have the opportunity to learn and practice management skills relating to acute cardiovascular, pulmonary, renal and neurologic intensive care. Airway management skills such as mask ventilation, endotracheal intubation, and ventilator management will be emphasized.

Each student's experience will be unique, predicated upon the patients for whom he/she cares during the rotation. Each student may not care for a patient with each diagnosis listed above, and may not observe, participate in or perform all of the procedures listed above.

Prerequisites: Completion of Years 1-3
Length of Program: 4 weeks (rotation ends on the Sunday of the 4th week)
Maximum Number of Students: 2 per rotation
When Offered: All rotations
Report to: Upper level resident for MICU service

ICU02 Trauma Surgery ICU

Program Director: Preston Miller, M.D.

Program Outline: The objective of this clerkship is to expose students to patient care in the Trauma Intensive Care Unit setting, with emphasis on patient management issues, including resuscitation from hemorrhagic shock, management of intracranial hypertension due to trauma, management of sepsis, and acute respiratory distress syndrome. Other issues include differential diagnosis, rational laboratory and radiologic testing, acute and chronic management of patients with multiple medical and surgical problems. Issues such as ventilator management, acute pharmacologic therapy for hemodynamic instability, effective antimicrobial therapy, nutritional support, and multisystem dysfunction will be addressed.

Students will participate as an integral part of the Trauma intensive care team. Students will assume supervised responsibility for patient admission, evaluation, diagnostic testing, initiation and evaluation of therapy, and be exposed to patient-care issues such as End of Life decisions, patient disposition, and family health care dynamics.

Responsibility for supervision of students will lie with the house staff and faculty on the Trauma Service. Attendance at the daily Trauma morning report and Thursday bedside teaching rounds will be part of this rotation, as well as daily teaching rounds with the Trauma Attending for the week.

Students may also spend time in the Patient Simulation Laboratory (PSL), where they will have the opportunity to learn and practice management skills relating to acute cardiovascular, pulmonary, renal and neurologic intensive care. Airway management skills such as mask ventilation, endotracheal intubation, and ventilator management will be emphasized.

Prerequisites: Completion of Years 1-3
Length of Program: 4 weeks
Maximum Number of Students: 3 per rotation
When Offered: All rotations
Report to: ICU-5B, 5th Floor, North Tower @ 6:00 am

ICU03 Coronary Care Unit

Program Director: Cynthia A. Burns, M.D.

Program Outline: The objective of this clerkship is to expose students to patient care in the Intensive Care setting, with emphasis on patient management issues, such as differential diagnosis, rational laboratory and radiologic testing, acute and chronic management of patients with multiple medical and surgical problems. Issues such as ventilator management, acute pharmacologic therapy for hemodynamic instability, effective antimicrobial therapy, nutritional support, and multisystem dysfunction will be addressed. Students will participate as an integral part of the intensive care team in the Coronary Care Unit (CCU). Students will assume supervised responsibility for patient admission, evaluation, diagnostic testing, initiation and evaluation of therapy, and be exposed to patient-care issues such as End of Life decisions, patient disposition, and family health care dynamics. Responsibility for supervision of students will lie with the upper level house staff and faculty. Attendance at the daily Intensive Care lecture series, given by faculty members from the Critical Care Section of the Department of Anesthesiology is expected. Students will be exposed to and have the opportunity to care for patients with a wide variety of life-threatening cardiac illnesses, for example: cardiogenic shock, acute myocardial infarction, congestive heart failure, valvular disease, ventricular and supraventricular arrhythmias, cardiac tamponade, aortic dissection, aortic aneurysm, hypertensive emergency.

Students will be exposed to and have the opportunity to observe, participate in, or perform a variety of procedures, such as arterial line placement, central line placement, hemodialysis catheter placement, PA catheter placement, intra-aortic balloon pump placement, cardiac catheterization, endotracheal intubation, thoracentesis, paracentesis, lumbar puncture, temporary cardiac pacer placement.

Students may also spend time in the Patient Simulation Laboratory (PSL), where they will have the opportunity to learn and practice management skills relating to acute cardiovascular, pulmonary, renal and neurologic intensive care. Airway management skills such as mask ventilation, endotracheal intubation, and ventilator management will be emphasized.

Each student's experience will be unique, predicated upon the patients for whom he/she cares during the rotation. Each student may not care for a patient with each diagnosis listed above, and may not observe, participate in or perform all of the procedures listed above.

Prerequisites: Completion of Years 1-3
Length of Program: 4 weeks (rotation ends on the Sunday of the 4th week)
Maximum Number of Students: 2 per rotation
When Offered: All rotations
Report to: Upper level resident on CCU

ICU04 Cardiothoracic Surgery Intensive Care Unit

Program Director: David L. Bowton, M.D.

Program Outline: The objective of this clerkship is to expose students to patient care in the Intensive Care setting, with emphasis on patient management issues, such as differential diagnosis, rational laboratory and radiologic testing, acute and chronic management of patients undergoing cardiac and thoracic surgery. Issues such as ventilator management, acute pharmacologic therapy for hemodynamic instability, effective antimicrobial therapy, nutritional support, and multisystem dysfunction will be addressed. Students will participate as an integral part of the Critical Care team that actively co-manages the patients in the Cardiothoracic Intensive Care Unit (CT-ICU). Students will assume supervised responsibility for evaluation, diagnostic testing, initiation and evaluation of therapy, and be exposed to patient-care issues such as End of Life decisions, patient disposition, and family health care dynamics. Responsibility for supervision of students will lie with the Anesthesiology and Cardiothoracic Surgery house staff and faculty. Attendance at the daily Intensive Care lecture series, given by faculty members from the Critical Care Section of the Department of Anesthesiology is required. Students will be exposed to and have the opportunity to care for patients with a wide variety of life-threatening cardiac illnesses, for example: acute hemodynamic swings associated with cardiac surgery, cardiogenic shock, acute myocardial infarction, congestive heart failure, valvular disease, ventricular and supraventricular arrhythmias, cardiac tamponade, aortic dissection, aortic aneurysm, hypertensive emergency. There is also extensive exposure to coagulation abnormalities associated with cardiac bypass. The CT-ICU experience includes care of patients who have recovered from their initial cardiac or thoracic surgery but have returned to the ICU because of other medical and surgical illnesses.

Students will be exposed to and have the opportunity to observe, participate in, or perform a variety of procedures, such as arterial line placement, central line placement, hemodialysis catheter placement, PA catheter placement, intra-aortic balloon pump use, cardiac catheterization, endotracheal intubation, thoracentesis, paracentesis, lumbar puncture, temporary cardiac pacer utilization.

Students may also spend time in the Patient Simulation Laboratory (PSL), where they will have the opportunity to learn and practice management skills relating to acute cardiovascular, pulmonary, renal and neurologic intensive care. Airway management skills such as mask ventilation, endotracheal intubation, and ventilator management will be emphasized.

Each student's experience will be unique, predicated upon the patients for whom he/she cares during the rotation. Each student may not care for a patient with each diagnosis listed above, and may not observe, participate in or perform all of the procedures listed above.

Prerequisites: Completion of Years 1-3
Length of Program: 4 weeks
Maximum Number of Students: 2 per rotation
When Offered: All rotations
Report to: ICU-5A, 5th Floor, North Tower @ 7:30 am

ICU05 Neurosurgical Intensive Care Unit

Program Director: David L. Bowton, M.D.

Program Outline: The objective of this clerkship is to expose students to patient care in the Neurosurgery Intensive Care setting, with emphasis on patient management issues, such as differential diagnosis, rational laboratory and radiologic testing, acute and chronic management of patients with multiple medical and surgical problems. Issues such as ventilator management, acute pharmacologic therapy for hemodynamic instability, effective antimicrobial therapy, nutritional support, and multisystem dysfunction will be addressed, mainly within the context of patients who have life-threatening neurological disorders. Students will participate as an integral part of the Critical Care Team that co-manages the patients in the neurosurgical intensive care unit (NS-ICU). Students will assume supervised responsibility for evaluation, diagnostic testing, initiation and evaluation of therapy, and be exposed to patient-care issues such as End of Life decisions, organ donation, and family health care dynamics. Responsibility for supervision of students will lie with the house staff and faculty from the Critical Care section of the Department of Anesthesiology. Attendance at the daily Intensive Care lecture series, given by faculty members from the Critical Care Section of the Department of Anesthesiology is required. Students will be exposed to and have the opportunity to care for patients with a wide variety of life-threatening neurosurgical problems, including subarachnoid hemorrhage, subdural hematoma, acute brain injury (traumatic and non-traumatic), acute spinal cord injury, intracranial / intraparenchymal bleeding, as well as patients who have undergone neurosurgical procedures but are admitted back to the NS-ICU for other complications, such as hemorrhage, venous thrombo-embolic disease, sepsis, etc.

Students will be exposed to and have the opportunity to observe, participate in, or perform a variety of procedures, such as arterial line placement, central line placement, hemodialysis catheter placement, PA catheter placement, intracranial pressure monitoring and drains, endotracheal intubation, thoracentesis, paracentesis, lumbar puncture, and other ICU procedures.

Students may also spend time in the Patient Simulation Laboratory (PSL), where they will have the opportunity to learn and practice management skills relating to acute cardiovascular, pulmonary, renal and neurologic intensive care. Airway management skills such as mask ventilation, endotracheal intubation, and ventilator management will be emphasized.

Each student's experience will be unique, predicated upon the patients for whom he/she cares during the rotation. Each student may not care for a patient with each diagnosis listed above, and may not observe, participate in or perform all of the procedures listed above.

Prerequisites: Completion of Years 1-3
Length of Program: 4 weeks
Maximum Number of Students: 2 per rotation
When Offered: All rotations
Report to: ICU-5C, 5th Floor, North Tower @ 7:30 am

ICU06 Pediatric Intensive Care Unit

Program Director: Michael Cannon, M.D.

Program Outline: The objective of this rotation is to expose students to patient care in the Pediatric Intensive Care Unit (PICU) where a multidisciplinary approach to patient care is utilized. The PICU team assists in the management of all patients admitted to the PICU as well as providing primary management of patients admitted to the PICU Service. The rotation emphasis patient management issues, such as differential diagnosis, appropriate laboratory and radiologic testing, acute and chronic management of pediatric patients with multiple medical and surgical problems. Issues such as ventilator management, acute pharmacologic therapy for hemodynamic instability, effective antimicrobial therapy, nutritional support, and multi-system organ dysfunction will be addressed. The student will have the opportunity to learn about extracorporeal life support (ECMO) when patients receiving this therapy are present in the PICU.

Students will participate as an integral part of the PICU team. The students will assume supervised responsibility for patient admission, evaluation, diagnostic testing, initiation and evaluation of therapy, and be exposed to patient-care issues such as End of Life decisions, patient disposition, and family health care dynamics. Exposure to the organ donation process may be gained during the rotation.

Students will be supervised by the PICU attending physician and the PICU house officer. Students will be expected to attend the weekly Department of Anesthesiology Resident Case Conference and Pediatric Anesthesiology/Pediatric Critical Care Subspecialty Conference, as well as weekly Critical Care Grand Rounds. Students will be excused to attend the Anesthesiology Resident Monday Lecture Series and Pediatric Grand Rounds if desired. Informal bedside teaching will occur on a daily basis by the PICU attending, and lectures will be given as often as patient care responsibilities will allow. Students may also spend time in the Patient Simulation Laboratory (PSL), where they will have the opportunity to learn and practice management skills relating to acute cardiovascular, pulmonary, renal and neurologic intensive care. Airway management skills such as mask ventilation, endotracheal intubation, and ventilator management will be emphasized.

Prerequisites: Completion of Years 1-3
Length of Program: 4 weeks
Maximum Number of Students: 2 per rotation *Additional students may be allowed at the discretion of the Medical Director of the rotation.
When Offered: All rotations
Report to: Pediatric Intensive Care Unit, 6th Floor, Brenner Children's Hospital @ 7:45 am

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ICU07 Neonatal Intensive Care Unit

Program Director: Cherrie Welch, MD, MPH

Program Outline: The objective of this clerkship is to expose students to patient care in the Neonatal Intensive Care setting, with emphasis on patient management issues, such as differential diagnosis, rational laboratory and radiologic testing, acute and chronic management of critically ill neonates and infants. There is an emphasis on developmental differences in physiology and pathophysiology. Students will become familiar with the spectrum of diseases unique to the neonate. They will become familiar with neonatal ventilator management, developmental

pharmacology and drug therapy, neonatal infections diseases and antimicrobial therapy, neonatal enteral and parenteral nutrition and fluid management. Students will participate as an integral part of the intensive care team. Students will assume supervised responsibility for patient admission, evaluation, diagnostic testing, initiation and evaluation of therapy. They will follow a limited number of patients throughout the rotation, thus gaining an appreciation for the interaction between developmental pathophysiology and patient care. They will be exposed to patient-care issues such as the ethics of neonatal care (e.g., What are the limits of viability?) End of Life decisions, patient disposition, and family responses to the illness of a neonate. As possible, they will also learn the theory and practice of neonatal procedures, such as endotracheal intubation, umbilical vessel catheterization, lumbar puncture and thoracentesis.

Responsibility for supervision of students will lie with the pediatric house staff and neonatology faculty. Students are expected to attend the daily Neonatology Education Series seminars given by neonatology faculty members.

Prerequisites: Completion of Years 1-3
Length of Program: 4 weeks
Maximum Number of Students: 1 per rotation
When Offered: All rotations
Report to: Neonatal Intensive Care Unit: 6th Floor, North Tower @ 8:00 am

ELECTIVES

ELECTIVES

All Wake Forest University School of Medicine students are required to complete six, four week electives prior to graduation.

ANESTHESIA

Requests from outside students for Anesthesia electives should be made through the Office of Student Services, Wake Forest University School of Medicine.

ANE01 Clerkship

Program Director: Jerry R. Clark, M.D.

Program Outline: The clerkship in Anesthesiology is structured to introduce the student to the basic principles of anesthesia delivery and perioperative management of surgical patients. The program is flexible and can be tailored to the individual needs of the student. Students will rotate through the Preoperative Assessment Clinic, general OR, Outpatient Surgery Center, pediatric OR, Regional Anesthesia/Acute Pain Service and cardiothoracic OR, participating in the care of patients in each area. Emphasis is placed on reviewing physiology and pharmacology, understanding how a patient's medical condition influences the anesthetic plan. Students will gain experience in airway management and tracheal intubation. A detailed list of objectives is included in the Medical Student Handbook, which will be distributed to each student on the first day of the rotation.

Objective: The goal of the 4th year medical student elective is to familiarize the student with the thought processes and procedures anesthesiologists use everyday in the care of perioperative patients. Therefore, the objectives are as follows:

1. Understand and practice clinical decision making in the perioperative setting, understanding how to individualize the anesthetic plan according to the patient.
2. Practice preanesthetic evaluation of patients and understand medical optimization.
3. Follow patients' care throughout the perioperative setting.
4. Become familiar with various agents used in the perioperative setting to induce and maintain anesthesia, control pain, and modify hemodynamics.
5. Become familiar with airway management, including mask ventilation, tracheal intubation, and LMA placement.
6. Become familiar with anesthetic delivery systems and monitoring devices.

Prerequisites: Year 3
Length of Program: 4 weeks
Maximum Number of Students: 4 per rotation
When Offered: All rotations except 4
Report to: OR inpatient holding room at 6:45 a.m.

ANE02 Critical Care Elective Rotation (For Students Who Do Not Attend WFUSM)

Program Director: David L. Bowton, M.D., FCCM, FCCP

[This experience is available only to non-WFU students and only at times when WFU students are not fully scheduled doing Neurosurgical or Cardiothoracic Surgery Intensive Care. This extramural elective should be requested through the WFUSM Office of Student Services.]

Program Outline: The critical care elective rotation provides the student with a four week exposure to critical care medicine in the 75-bed adult intensive care unit of The Wake Forest University

Baptist Medical Center. The goal of this rotation is to introduce the student to intensive care medicine, especially respiratory and hemodynamic support of the critically ill patient. The anesthesia/critical care team will make daily bedside rounds with the primary service, and play an integral part in the ongoing management of patients in the intensive care unit. Students will actively participate in the management of the difficult-to-wean patient, initiating and monitoring enteral and parenteral nutrition, and placement of invasive pressure monitors. A didactic lecture series covering the essentials of respiratory and cardiovascular physiology, intracranial pressure control, acid-base and fluid balance, sepsis, mechanical ventilation, poisoning, renal failure, and other common medical emergencies is given three times weekly by the critical care faculty.

Students may also spend time in the Patient Simulation Laboratory (PSL), a state of the art, computerized patient care room featuring a life-like fully interactive patient, capable of nearly all anatomic, physiologic and pharmacologic responses. Patient care scenarios such as acute myocardial infarction, cardiac arrest, anaphylaxis or traumatic injury can all be realistically duplicated. The student will personally evaluate the patient, generate a differential diagnosis, institute therapy, personally perform all interventions, and analyze the effectiveness of the therapy. Feedback in the form of videotaping of the PSL session facilitates identification of individual strengths and areas for potential improvement.

Objective: The goal of the 4th year critical care elective is to allow the student to gain an appreciation and familiarity with the thought processes and procedures which physicians utilize in the care of their critically ill patients in the intensive care unit. The objectives include:

1. To gain experience in obtaining a history, performing a focused clinical exam, and developing a treatment plan for assigned patients in the intensive care unit.
2. To appreciate the dynamic nature of critically ill patients, through performance of daily evaluations of assigned patients, and presentation of these patients on rounds.
3. To integrate acquired patient data and medical knowledge, generate appropriately broad differential diagnoses for a number of clinical problems, and propose changes in patient care based upon clinical reasoning and rational laboratory and radiologic examinations.
4. To gain experience in insertion of invasive pressure monitors such as arterial lines, central venous and pulmonary artery catheters, and interpretation of the data obtained from these monitors.
5. To increase the knowledge base relating to issues in critical care medicine, and gain experience and confidence in applying this knowledge to diagnosis and treatment of a variety of patient care issues relating to care of patients in the intensive care unit.
6. To gain an appreciation of the complex physician-patient-family dynamics involved in the management of critically ill and dying patients.
7. To gain an understanding of the role of the critical care physician as consultant in the management of medical and surgical intensive care patients.

Prerequisites: Year 3
Length of Program: 4 weeks
Maximum Number of Students: 2 per rotation
When Offered: All rotations
Report to: ICU Medical Director's secretary two to three days before rotation begins (716-6533) to pick up manual, etc. Office is located in the ICU on the 5th floor of the North Tower.

ANE03 **Pediatric Critical Care**

NOTE: This course is identical to PED08. Final permission to take this course must come from the Office of Student Services.

Program Director: Michael Cannon, M.D.

Program Outline: Daily rounds will begin at 8:00 am. The student should gather necessary clinical information to present and discuss patients in the Pediatric ICU in an established format at morning rounds. Students will acquire necessary clinical information about the patient's clinical status and aid in the execution of treatment plans. An assigned reading list and selected articles relevant to the care of the current patients are provided and should be reviewed by the students prior to completion of this elective. Participation in the resident course lecture series is also expected. The student may choose to make one formal presentation on a subject of his or her choosing as arranged with the PICU attending.

Objective: The student will:

1. Be able to collect and present clinical information about patients in the Pediatric ICU in a clear and concise fashion.
2. Learn the diagnostic hallmarks and management priorities for early and late respiratory failure, hypovolemic and septic shock and cardiopulmonary failure.
3. Be expected to prepare a short presentation on a topic in Peds Critical Care and present it near the end of the rotation to the team. The student will have the opportunity to demonstrate skills in airway management, gaining vascular access, intravascular volume administration and dysrhythmia management.
4. Develop and demonstrate the use of Medline searches for clinically relevant issues regarding the care of the Pediatric ICU patients.

Prerequisites: Year 3
Length of Program: 4 weeks
Maximum Number of Students: 2 per rotation
When Offered: All rotations
Report To: Program Director or Pediatric ICU Attending Physician at 7:45 a.m. in the Pediatric Intensive Care Unit, 6th Floor, Brenner Children's Hospital.

COMMUNITY MEDICINE

Community Medicine rotations are initially scheduled through the Office of Student Services. Student assignments will be finalized by the Community Medicine staff (Sandy Caudle and Ann Hiott, M.D.) only when all schedules have been received. If a site is full or is unable to take a student during the time period requested the student will be notified and assisted in making other selective arrangements. All sites are open to students from other health professions schools after July 31 of each academic year.

Students are encouraged to select their sites carefully, and to avoid making changes to their schedules, especially after placement is confirmed. Re-assignments or changes are made on an individual basis and must be cleared through the Community Medicine staff first and then the Office of Student Services. Generally, site changes will only be permitted if there is hardship involved. A drop/add form is required when making changes, per Student Services. Please send email notification to Sandy Caudle at scaudle@wfubmc.edu in order for us to notify the preceptor so this space will be available to other students.

Course Requirements

- Completion of a four week rotation with a physician in an ambulatory care facility.
- If student is signed up for CM17 or CM18, completion of the special elective application is required to be completed and turned into the Community Medicine office at least three weeks prior to the beginning of the rotation.

Special elective applications can be obtained by contacting Sandy Caudle at scaudle@wfubmc.edu or by going to the following website: http://www1.wfubmc.edu/fam_med/Education/Predoc+website.htm

Course Objectives: At the conclusion of the Community Medicine Preceptorship, the student should be able to:

Community-0riented Care

- Complete a problem-oriented medical history and physical examination and present findings, differential diagnosis and recommended treatment plan to the preceptor for a wide variety of health problems found in an ambulatory care setting;
- Discuss the effectiveness of continuity of care, health promotion and disease prevention activities in patient management;
- Recognize the effects of family dynamics including the impact of illness on the family unit, and the role of family members in patient management;
- Identify economic, ethical and legal issues in clinical decision-making;
- Identify learning issues and seek information from the preceptor, library or other resources that address the issue;

Community and Preventive Medicine

- Use demographics and appraised health status of a community in assessing the health of the individual;
- Identify health care resources within a community, a practice and a family that aid diagnosis and treatment of a specific health problem;
- Explain to the preceptor the significance of the individual's and the community's health beliefs and cultural values in patient care and treatment;
- Identify interventions that will address the prevention and management of a specific health problem;
- Define the responsibilities of the physician, allied health personnel, community resources, and the patient in health promotion/disease prevention activities;
- Define the leadership responsibilities of the physician in a community setting;

Office Administration

- Recognize the organizational structure and administrative tasks of an effective medical office practice;

- Describe the physician's role and responsibilities in the management of an effective medical office practice;
- Discuss the implications of managed care for the community and the practice;

Contemporary Health Care Issues

- Discuss contemporary health care issues unique to ambulatory care.

Community Medicine Staff:	Sandy Caudle	716-2246
	Ann Hiott, M.D.	716-2246

PRECEPTOR SITES

CM01 Asheboro, North Carolina
Family Medicine/Multi-Specialty

Program Director: Robert Dough, M.D.

Preceptors: Robert L. Dough, M.D., Michael O. Irwin, M.D. and Patricia Shevlin, M.D.

Program Outline: Asheboro is a community of 20,000 with a 150 bed general hospital. The preceptors are family practitioners in a practice that is active in a variety of professional and community endeavors. The student will spend most of their time in the office, but may also participate in hospital rounds. Since Asheboro is a predominantly industrial community with a large referral area, students will have the opportunity to see a variety of conditions in patients from a broad background of socioeconomic circumstances.

Objectives: This clerkship will offer the student the opportunity to participate in the delivery of primary and secondary medical care in a medium sized industrial community. In addition, it will allow the student to experience contact with patients from both rural and urban backgrounds and occupations.

Prerequisites: Completion of Years 1-3
Length of Program: 4 weeks
Maximum Number of Students: 2 per rotation
When Offered: All Rotations
Report to: Call Office Manager at least two weeks prior to beginning the rotation at 336-625-4215

CM03 Boone, North Carolina
Blue Ridge Pediatric & Adolescent Medicine, Inc.

Program Director: Gregory Adams, M.D.

Program Outline: The student will experience both outpatient and limited inpatient care of children ages birth – 18 years. The pediatrician operates a modern well-equipped office as well as a satellite location and allows the student to participate in all Years of office practice. The practice utilizes electronic medical records and also participates in a variety of ongoing national research studies. The student may also explore aspects of medical economics and office management in this setting.

Objectives: Primary Care pediatric and adolescent medicine

Prerequisites: Completion of Years 1-3
Length of Program: 4 weeks
Maximum Number of Students: 3-4 per rotation
When Offered: All Rotations
Report to: Call the practice at least two weeks prior to the beginning of the rotation. Contact: Laura Hardee at 828-262-0100

CM05 Conover, North Carolina
Family Medicine

Program Director: Douglas W. Michael, M.D.

Preceptors: Douglas W. Michael, M.D., William Long, M.D., Kevin Mikus, M.D., David Coffey, M.D. and Brian S. Vierling, M.D.

Program Outline: Conover Family Practice is staffed by five residency trained, board certified family physicians and two mid-level practitioners who offer the full range of family practice services (except obstetrics) to the eastern Catawba County population. Pediatric, general medical, minor surgical, industrial medicine, preventive medicine, and laboratory and x-ray services are offered to our patients in an office setting. We also carry out an active hospital and nursing home practice. The student will also have access to non-physician community agencies as desired. Our physicians and staff will offer many opportunities for discussion of various other aspects of medical practice, practice management, and community life as a physician.

Prerequisites: Completion of Years 1-3
Length of Program: 4 weeks
Maximum number of students: 1 per rotation
When offered: All Rotations
Report to: Call preceptor at least 2 weeks prior to beginning the rotation. 828-464-3821

CM07 Greensboro, North Carolina
Student Health

Program Director: Eldaliz A. Fernandez, M.D.

Program Outline: The student will participate as a member of the health care team assembled to provide a wide range of primary care medicine to a young adult student population. The experience includes traditional diagnostic and therapeutic medicine in an ambulatory setting with a strong emphasis on health promotion and disease prevention activities. (A PROJECT MAY BE REQUIRED IN HEALTH PROMOTION AND DISEASE PREVENTION). The health service has its own laboratory and radiology service, a Health Education Unit, and a Mental Health Unit consisting of clinical psychologists and a part time psychiatrist. A non-refundable $20.00 parking fee is required.

Objectives: The student will provide supervised primary care clinical medicine to a specialized population and work with health educators to provide health promotion/disease prevention interventions to a young adult population.

Prerequisites: Completion of Years 1-3
Length of Program: 4 weeks
Maximum Number of Students: 1 per rotation
When Offered: Rotations 1-12
Report to: Call Dr. Fernandez at least two weeks prior to beginning the rotation. 336-334-3546

CM08 Lewisville, North Carolina
Family Medicine

Program Director: Terry D. Hess, M.D. and David Lee, M.D.

Program Outline: Family Medical Associates of Lewisville is currently staffed by five board certified, residency trained family practitioners who offer a full range of family practice services. This includes pediatrics, adult medicine and geriatrics. We do not provide nursing home care. During your rotation, you will be expected to participate in patient contact in the office, minor surgical procedures, laboratory medicine, and on going hospital nursery rounds as an option.

Objectives: This elective will offer the student broad experience in family practice and is designed for students who are pursuing a career in family medicine or primary care practice.

Prerequisites: Completion of Years 1-3
Maximum Number of Students: 1 per rotation (a second student may be added with prior approval from the clerkship director)
When Offered: Open for every rotation
Report to: Call preceptor at least one week prior to beginning date of rotation at 336-712-0801

CM09 Lumberton, North Carolina
Southeastern Regional Medical Center
Primary Surgery/ER/Ob-Gyn/Orthopaedics/Urology

Program Directors: DE Ward, Jr., M.D. and Samuel E. Britt, II, M.D.

Program Outline: This hospital based rotation offers a program that may be tailored to the needs and desires of individual students.
The student may elect to divide his/her time among the following areas:

a. Surgery - First assistance at operating table and scrub with all surgeons on the surgical staff including all the specialists. They may also work in the ER/Trauma/primary care.
b. Emergency room - offers experience in dealing with trauma. Considerable primary care is also provided through the emergency room, including repair of lacerations.
c. Ob/Gyn - offers a significant number of deliveries and GYN Surgery and work in the Robeson County Health Department OB Clinic examining obstetrical patients.
d. Orthopaedics
e. Urology

Objectives: This clerkship offers the student the experience in the delivery of primary and secondary care in a medium sized urban community. The rotation is heavily weighted towards surgery, ER medicine, and Ob/Gyn.

Southeastern General is a medium-sized (400 bed) hospital which functions as a regional referral center serving a large rural and urban population. The preceptor is a general surgeon who has a great interest in this educational program. In conference with Dr. Ward the student will be able to tailor the rotation to his/her interests.

Prerequisites: Completion of Years 1-3
Length of Program: 4 weeks
When Offered: Rotations 2-11
Maximum number of students: 1-2 per rotation depending on program selected by student.
Report to: Student must call Dr. DE Ward, Jr. at 910-738-4276 or Samuel E. Britt, II, M.D. at 910-758-8556 about travel and other arrangements.

CM10 Newton, North Carolina
Family Medicine

Program Director: Alan Forshey, M.D.

Preceptors: Alan Forshey, M.D., David G. Peltzer, M.D., Bartholomew J. Lopina, M.D., Alan Story, M.D. and Shannon M. Sherfey, M.D.

Program Outline: Newton Family Physicians is a five physician corporate partnership established in 1982. Currently the practice has 45,000 active patients. 45% of the practice involves children, 24% the elderly and rest balanced between young and middle aged adults. The facility includes 21 exam rooms, 2 treatment rooms, and complete lab and x-ray facilities. An average of 600-800 patients are seen weekly including sick visits, well child care, company physicals and worker's compensation injuries. Also have two family nurse practitioners.

Objectives: The student will have the opportunity to participate in the delivery of care in the office and local hospital setting. The student may have the opportunity to participate in the first hand management of a medical practice including billing, Medicare and insurance set-up, scheduling and purchasing. The rotation is designed for students who are pursuing a career in Family Medicine.

Prerequisites: Completion of Years 1-3
Maximum number of students: Two students per year
When offered: All Rotations
Report to: Contact Melissa White, Business Manager at 828-465-3928 at least one week prior to beginning the rotation.

CM11 Salisbury, North Carolina
Family Medicine

Program Director: Lloyd E. Nickerson, M.D.

Program Outline: Salisbury is a community of 30,000 with a 304 bed general hospital. The preceptor, a family practitioner, is active in a variety of professional and community endeavors. His practice consists of himself and one Nurse Practitioner. The student will spend time in the office and in nursing homes. Since Salisbury is largely an industrial community with a large referral area, the student will have an opportunity to see a variety of conditions in patients from a broad background of socioeconomic circumstances.

Objectives: The clerkship will offer the student the opportunity to participate in the delivery of primary medical care in a small sized industrial community. In addition, it will allow the student to gain experience with patients from rural and urban backgrounds and occupations. Experience will be gained primarily in pediatrics, industrial medicine, geriatrics, and routine medical care for all ages.

Prerequisites: Completion of Years 1-3
Maximum number of students: 1 per rotation
When offered: To be determined in the Spring of 2009
Report to: Call preceptor at 704-633-7070 at least two weeks prior to beginning of rotation

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CM14 Thomasville, North Carolina
Pediatrics

Program Director: Rob Williams, Jr., M.D.

Preceptors: David R. Williams, M.D., Amy Suttle, M.D., Stephen Hardy, M.D., Keith Thompson, M.D., Maria Pincus, M.D., Ed Reedy, M.D., Don Winters, M.D., Heather Cooper, M.D., Cathy Riggan, M.D., Andrea Bennett-Cain, M.D. and Beatriz Juncadella, M.D.

Program Outline: Ten board-certified pediatricians operate a group practice which delivers the majority of primary care for children in the Thomasville area of Davidson County. They operate a modern, well-equipped office and allow the student to participate in all Years of office practice. Although the hospital practice of pediatrics is limited by the nature of the specialty, each physician in the group has also agreed to allow the student to participate in this segment of his/her practice. The office set-up includes a well-stocked library and conference room for discussion of problem cases.

Objectives: This rotation will deal primarily with ambulatory pediatric patients and affords the student a unique opportunity to participate in the delivery of such care.
Prerequisites: Completion of Years 1-3
Length of Program: 4 weeks
Maximum number of students: 1 per rotation
When offered: Rotations 5,7,9
Report to: Call preceptor at least two weeks prior to beginning the rotation. 336-475-2348

CM15 Wilmington, North Carolina
Internal Medicine/Family Medicine

Program Director: Neill H. Musselwhite, M.D.

Preceptors: Charles Almond, M.D. (FM), Charles B. Herring, M.D. (IM), Neill H. Musselwhite, M.D. (FM), Richard Corbett, M.D. (Radiology), Christian Daniel, M.D. (FM), Brian Broadbent, M.D. (FM), and Gregory Palega, M.D. (IM)

Program Outline: Students will be introduced to a comprehensive primary care group practice staffed by internal medicine and family medicine physicians. In addition to clinical medical call, the practice offers a program in corporate medicine, various screening services, nutrition services and the following procedures: radiology, laboratory, Holter monitor, treadmill testing, audiology services, spirometry, DEXA scanning, flexible sigmoidoscopy, and travel health services.

Objectives:
1. Participation in quality primary care.
2. Exposure to preventive health.
3. Introduction to corporate medicine
4. Observation of various procedures.

Prerequisites: Completion of Years 1-3
Length of Program: 4 weeks
Maximum Number of Students: 2 per rotation
When offered: All Rotations
Report to: Call Meredith Hughes at least two weeks prior to beginning this rotation. 910-343-0161

CM16 Winston-Salem, North Carolina
Student Health

Program Director: Cecil D. Price, M.D.

Program Outline: Students who choose this elective will work with a Family Medicine physician and a pediatrician at the Student Health Service. Patients are seen in a campus clinic setting during regular office hours and after hours in the clinic/observation unit.

Objectives: This program is designed to offer the student an exposure to a primary care medical environment in a university setting. In order to do this the student will:

- Participate in patient care
- Explore health related programs available on campus
- Share his/her knowledge of procedures or therapies applicable to the university
- Participate in longitudinal site programs

Prerequisites: Completion of Years 1-3
Length of Program: 4 weeks
Maximum number of students: 1 per rotation
When offered: 6, 7, 8, 10, 11, and 12
Report to: Call preceptor at least one week prior to beginning the rotation. 336-758-5218 (Contact: Carolyn Potts)

CM17 Special Opportunities in Community Medicine - North Carolina

Program Director: C. Randall Clinch, DO, MS
Program Coordinator: Sandy Caudle

Program Outline: This course is for those students who wish to undertake a Community Medicine rotation within the state of North Carolina. Such rotations must be rooted in a primary care specialty, must be primarily an outpatient experience, and must have the goals and objectives of the rotation approved by the Program Director prior to approval of the elective. **Rotation requests for experiences with non-primary care specialists or sub-specialists will not be considered for approval.**

Objectives: To allow the student to participate in aspects of Community Medicine that they are strongly motivated to pursue.

Prerequisites: Completion of Years 1-3. Student must complete special elective applications provided by the Community Medicine staff (Sandy Caudle at – scaudle@wfubmc.edu) after student signs up for the rotation. The applications must be completed and returned to the Community Medicine staff **at least eight weeks prior** to the beginning of the rotation for approval.

AHEC housing assistance may be available. A two-month (8-week) request should be made to Sandy Caudle at scaudle@wfubmc.edu. You will be notified in a timely manner to housing availability.

Length of program: 4 weeks
When offered: All Rotations

CM18 Special Opportunities in Community Medicine - Out of State

Program Director: C. Randall Clinch, DO, MS
Program Coordinator: Sandy Caudle

Program Outline: This course is for those students who wish to undertake a Community Medicine rotation outside the state of North Carolina. Such rotations must be rooted in a primary care specialty, must be primarily an outpatient experience, and must have the goals and objectives of the rotation approved by the Program Director prior to approval of the elective. **Rotation requests for experiences with non-primary care specialists or sub-specialists will not be considered for approval.**

Objectives: To allow the student to participate in aspects of Community Medicine that they are strongly motivated to pursue.

Prerequisites: Completion of Years 1-3. Student must complete special elective applications provided by the Community Medicine staff (Sandy Caudle at – scaudle@wfubmc.edu) after student signs up for the rotation. The applications must be completed and returned to the Community Medicine staff **at least eight weeks prior** to the beginning of the rotation for approval.

Length of program: 4 weeks
When offered: All Rotations

CM24 Rowan Diagnostic Clinic – Salisbury, North Carolina

Program Director: Sean Malone, M.D., F.A.C.P.

Program Outline: The student will participate in the practice of primary and secondary care with a group of internists in a medium-sized community. The experience includes office and hospital work primary and consultative care of adults and use of specialized procedures.

Objectives: 1) Gain experience in the art of medicine by observing the practice of internal medicine away from a medical center. 2) Gain further scientific information from discussions with the physicians and reading about individual patients.

Prerequisites: Completion of Years 1-3
Length of Program: 4 weeks
Maximum number of students: 2 per rotation
When offered: 1-12
Report to: Sean Malone, M.D., F.A.C.P.

DERMATOLOGY

Requests from outside students for Dermatology electives should be submitted to Alan Fleischer, M.D., Department of Dermatology, Wake Forest University School of Medicine, Medical Center Blvd., Winston-Salem, NC 27157-1071, Attention: Denise Smith. Telephone (336) 716-7882. Fax (336) 716-7732.

DER01 Clinical Dermatology

Program Director: Alan Fleischer, M.D.

Program Outline: The student will actively participate in the care of pediatric and adult patients in the dermatology clinics. Several didactic sessions will be provided each week as a supplement to the experience in the clinics. Each student will work closely with more than one faculty member and several residents.

Objectives:

1. The learner will observe clinical problems in dermatology and dermatologic surgery.
2. The learner will be able to develop a differential diagnosis and treatment plan for patients with a variety of dermatologic diagnosis. Some of these diagnosis may include:
    - Acne
    - Actinic keratosis
    - Alopecia
    - Atopic dermatitis
    - Benign neoplasms
    - Dermatitis
    - Drug hypersensitivity reactions
    - Dyschromia
    - Epidermoid cyst
    - Malignant neoplasms
    - Psoriasis
    - Rosacea
    - Seborrheic dermatitis
    - Seborrheic keratosis
    - Urticaria
    - Viral Warts
3. Students will develop an understanding of dermatologic therapeutics and topical corticosteroid potency.

Prerequisites: Year 3
Length of Program: 4 weeks
Maximum Number of Students: 2 per rotation
When Offered: All Rotations
Report To: Denise Smith at 8:00 am in the Dermatology Department, Ground Floor, Watlington Hall. If possible, it is suggested that students obtain their schedule for the rotation the week before it begins.
Suggested Textbooks: Fitzpatrick Color Atlas & Synopsis of Clinical Dermatology - Fitzpatrick, Johnson and Wolff, 4th Ed. McGraw-Hill, 2001, Lookingbill•Marks-Principles of Dermatology.

Research opportunity in Dermatology, see NCE05 on page 76.

EMERGENCY MEDICINE

EMED01 Pediatric Emergency Medicine

Program Director: Milan D. Nadkarni, M.D.

Program Outline: The objective of this course is to expose students to patient care in the Pediatric Emergency Department with emphasis on acute patient management issues such as differential diagnosis, laboratory and radiologic testing in an acute care setting. All students will be directly supervised by the Pediatric Emergency Medicine attending/Emergency Medicine attending on duty. Student will work 15 twelve-hour shifts or 18 eight-hour shifts during the four-week period. The student will work as an intern under direct supervision of the ED attending on duty. The student is encouraged to attend all of the ED conferences with the Pediatric ED conference attendance being mandatory. Student will be required to present a short case and discussion toward the end of the rotation.

Objectives: Students completing this rotation should:
1. Be able to perform a detailed but concise history, appropriate physical exam in an acute care setting
2. Recommend appropriate laboratory and x-ray studies to confirm a diagnosis
3. Recommend appropriate treatment and management plans in an acute setting
4. Be exposed to pediatric trauma and resuscitation
5. Be exposed to advanced airway techniques and rapid sequence intubation in pediatrics
6. Demonstrate professional demeanor when interacting with patients in an acute care setting.

Prerequisites: Completion of Year 3
Length of Program: 4 weeks
Maximum Number of Students: 1 per rotation
When Offered: All Rotations

EMED02 Extramural Emergency Medicine

Program Director: David E. Manthey, M.D., FAAEM

This extramural rotation is available to all extramural students participating in U.S. Medical Schools. All students must apply with a letter of intent, a letter of recommendation (preferably from an EM physician), curriculum vitae, a copy of their medical school transcript, and their USMLE scores. The students will be chosen on merit. This elective is not available to satisfy the mandatory rotation for WFUSM students.

They will be offered a spot based on availability of schedule (up to 2 per month). However, these students must be approved by Student Services for an extramural spot at this institution based on current guidelines for insurance, immunizations, etc., before granted final approval to attend.

Program Outline: This four week rotation will occur at Wake Forest University Baptist Medical Center. Students will function as the primary health care provider for all patients they encounter and coordinate all of their care as any emergency physician would. They will be under the direct supervision of an EM attending physician or chief resident. Students will work up to sixteen 8-hour shifts and two full weekends per each four week period. Approximately 18 interactive case-study presentations will be presented by an attending physician at pre-designated times during the rotation (set curriculum rotates each month). The student will be given handouts that cover required reading. Separate self-study packets are included in their required assignments. Attendance at the lectures is required. Students will present a fifteen-minute case and discussion

at the end of the rotation. EMS (ambulance) experience, patient simulation, cadaver lab and procedures are a part of the rotation. Students will be required to pass an examination that covers basic topics in emergency medicine.

Objectives:

1) Patient Care
   a) Interviewing techniques
   b) Directed physical examination
   c) Developing a differential diagnosis
   d) Initiate resuscitation and stabilization
   e) Procedural and wound care
   f) Proper disposition and follow-up
2) Medical Knowledge
   a) Identification of acutely ill patient
   b) Developing an evaluation plan
   c) Test interpretation
   d) Developing a therapeutic plan
   e) Treatment of common acute problems
3) Practice Based Learning and Improvement
   a) Self directed learning project
   b) Use of information technology
   c) Evaluation of literature
4) Interpersonal and Communications Skills
   a) Establishing rapport
   b) Effective presentation
   c) Interaction with consultants
5) Professionalism
   a) Respect
   b) Ethical behavior
   c) Sensitivity to cultural issues
6) Systems Based Practice
   a) Assessment of undifferentiated patient
   b) Appropriate referral
   c) Primary Care for the uninsured and those without PCPs
   d) Understanding of emergency procedures

Scheduling: All schedule requests for EMED02 must be submitted to **Tracie Goldsmith** in Emergency Medicine by the Monday **two weeks** before the start of the rotation. Requests received after that time will not be accepted. Please note that our rotation goes through 6pm on the last Sunday of the rotation period. Special circumstances such as presenting at national meetings should be discussed with David Manthey (dmanthey@wfubmc.edu) at the earliest possible time.
Prerequisites: All Year 3 requirements have been fulfilled (Optimal time is in Year 4)
Length of Program: 4 weeks
Maximum Number of Students: 2 per rotation period
When Offered: All Rotations
Report To: The assigned meeting room (info. on e-wake) at **8:00 am sharp** on the first day of rotation for orientation.

FAMILY MEDICINE

Requests for FM01, Family Medicine, should be made initially through the Office of Student Services, Wake Forest University School of Medicine, and are subject to approval by Dr. Ann Hiott, Director of Predoctoral Education, Family Medicine. Inquiries can be made through Karen Vaden, Coordinator, Family Medicine, (336)716-9560 or email: kvaden@wfubmc.edu

FM01 Family Medicine - Clerkship (for students from WFU and other medical schools)

Program Director: C. Randall Clinch, DO, MS

Program Outline: This elective rotation offers individualized teaching in the management of outpatient and inpatient medical problems. Students will spend time on the Family Medicine Inpatient Service Team (IPS) and in a Family Medicine clinic learning outpatient care under the supervision of faculty members and senior residents (typically 2 weeks in each setting). While on the Inpatient Service, the student will function like an Acting Intern (AI) assuming responsibility for assigned patients (with supervision by a licensed physician). Call will be one night per week while on the Inpatient Service (2 total). Other activities include attendance at group discussions, conferences and morning reports. The FM01 elective is not an equivalent (substitute) course to the AIM50 (Family Medicine Advanced Inpatient Management Course offered to WFU students).

Objectives: Upon Completion of the clerkship the student will demonstrate:

12. Presence of acceptable fund of biomedical knowledge for the practice of clinical medicine
13. Ability to augment knowledge by using appropriate resources
14. Ability to take an accurate history and perform a reliable physical examination upon hospitalized and ambulatory patients
15. Ability to synthesize, interpret and integrate clinical data to form accurate and appropriate differential diagnoses and initiate logical plan of investigation and therapy for the majority of patients encountered
16. Understanding of the basic principles of longitudinal health care of the patient in context of family by including the impact of illness on patient and family when determining the differential diagnosis and management of a health problem.
17. Interest and effort in performing patient care-related procedures as opportunities arise (LP, ABG, thoracentesis, blood culture, etc.)
18. Understanding of the basic principles of health promotion and disease prevention and how these can be applied in an ambulatory and inpatient setting
19. Ability to interact with patients as a thoughtful, compassionate, professional caregiver
20. Ability to work effectively and supportively with all members of a health care team
21. Ability to communicate medical information accurately and appropriately to patients and colleagues
22. Evidence of sense of responsibility, integrity and ethical standards.

Methodologies:

9. The student will perform the initial evaluation (history and physical exam), generate a differential diagnosis, and initiate an appropriate diagnostic and therapeutic plan (with input and supervision of upper level residents and attendings) for a controlled and limited number of patients.
10. The student will be responsible for daily assessment of his/her patients, revision of diagnostic and therapeutic plans based on changing conditions, ongoing communication with supervising physicians/consultants/nursing staff and interaction with the patient's family members.
11. The student will be responsible for day-to-day care of assigned patients, including performance of needed procedures (with supervision by a licensed physician), documentation of medical care by progress notes, and other activities typically associated with internship.
12. The student will be an integral member of the inpatient team, including interns, upper level

residents and attending physicians, who will provide appropriate supervision of the student, countersign written orders, and provide ongoing feedback regarding clinical skills and abilities of the student, appropriateness and thoroughness of care, ability to review and incorporate information from the medical literature, and guidance regarding continued enhancement of clinical performance. Feedback will also be ongoing regarding the student's medical fund of knowledge and professionalism.

Prerequisites: In final year of medical school.
Length of Program: 4 weeks
Maximum Number of Students: 1 student per rotation 5, 6, 7, 8, 9 and 10
Report To: Karen Vaden on the first day of the rotation (2nd floor, Piedmont Plaza Building One). If a visiting student, report to Karen Vaden following check-in at the Office of Student Services (3rd Floor, Watlington Hall).

FM03 Sports Medicine – (for WFUSM Students only)

Program Director: Daryl A. Rosenbaum, M.D.

Program Outline: This elective is designed for motivated, energetic students with a strong interest in Primary Care specialties. Activities can include seeing patients in sports medicine focused clinics; athlete training rooms at local universities; sport event coverage; treadmills. The student may be expected to present a 1 hour conference for physicians, residents, nursing staff and others on a sports medicine topic of interest with director approval. Weekend and after hour activities are included.

Prerequisites: Successful completion of Years 1-3. Students will have to contact Dr. Daryl Rosenbaum to arrange the elective. No one will be accepted without his prior approval.
Length of Program: 4 weeks
When Offered: Available all rotations except 3, 4 and 9. Students must contact the Program Coordinator, Johnnie Pace, by phone (716-2794) or Email: jpace@wfubmc.edu 2 months prior to the beginning of the rotation to confirm availability.
Maximum Number of Students: 1 per rotation
Report To: Report to Johnnie Pace on the first Monday of the rotation; Department of Family & Community Medicine, Piedmont Plaza I, Second Floor.

FM04 Extramural Family Medicine Sampler

Program Director: C. Randall Clinch, DO, MS

Program Outline: This extramural rotation is available to non-WFU students participating in US medical schools. All students must apply with a letter of intent and must be approved by Student Services for an extramural spot at this institution, based on current guidelines for insurance, immunizations, etc. before granted final approval to attend. Students will be chosen on availability and merit. This elective is not available to satisfy the mandatory rotation for WFUSM students.

The objective of this course is to expose students to the Department of Family and Community Medicine at WFU/in a midsize North Carolina community, and provide a sampling of the breadth of knowledge, skills, and attitudes involved in Family Medicine. One week each will be spent with a focus on inpatient family medicine, outpatient family medicine, sports medicine, and Maternal Child Health/procedures. The course is designed for those students planning on Family Medicine as a career. The student will work as an intern, directly supervised by the Family Medicine attendings and Family Medicine residents. Work hours will vary depending on the week's assignment but will involve after hours duties on the inpatient service (one call night for the week), labor and delivery, and sporting event/training room coverage. General participation in the department will be encouraged at morning reports and noon conferences, for example.

Objectives: To provide the student with a sampling of the breadth of knowledge, skills, and attitudes involved providing primary care in a midsize North Carolina community.

Scheduling: All schedule requests for FM04 must be submitted to Karen Vaden (letter of intent) in Department of Family and Community Medicine AND to Student Services by the Monday one month before the start of the rotation, but may be filled on a first come, first served basis.

Prerequisites: Completion of 3rd year Family Medicine Clerkship and in 4th year of medical school.
Length of Program: 4 weeks
Maximum number of students: 1 per rotation
When offered: May – January for non-WFU students

FM05 Advanced Communication Skills in Medical Practice
Paired Observation and Video Editing (POVE)

Program Director: Gail S. Marion, PA-C, Ph.D and William J. McCann, Psy.D

Program Outline: The Department of Family & Community Medicine is inviting four, 4th year students to participate in an innovative elective. In addition to advanced communication skills it will cover advanced patient management skills specifically addressing: somatization, adherence to medical advice, mindfulness and medical practice, challenging patients and integrated psychopharmacology and other topics.

Goal:
The goal of the course is to develop advanced communication skills for more effective and efficient patient care.

Course objectives:
1. Students can describe core medical communication and relationship skills as defined in the Kalamazoo Consensus statement and other similar documents.
2. Students can practice core communication skills and receive focused feedback by seeing at least 50 patients in three weeks.
3. Students will demonstrate competency in the use of core communication skills by creating a video essay of clips from patient encounters.
4. Students will create a teaching video to use in teaching students, residents and faculty.

Course structure:
1. Students are given a series of mini-talks (30-60 minutes) on core communication topics including: communication skills overview, collaborative agenda setting, efficiency in the medical interview, eliciting the patient and family perspective, family assessment, reaching mutual agreement on a plan, health behavior change, primary care counseling approaches, mindful practice in medicine. Students are also invited to request other topics of interest, with mini-talks and debriefing sessions occurring every two to four days.
2. After each mini-talk, the students see patients to practice skills. Patients are on the schedule of a faculty or senior resident in primary care or general internal medicine. Student pairs always see patients together, rotating roles as "doctor" and as "observer." The students are expected to conduct a complete interview, performing appropriate medical exams and procedures within the scope of their training and experience. All patients are discussed with the preceptor who must also see the patient. The medical student who is the "observer" uses an observation form (sample attached) to track the use of communication skills. Students are expected to see an average of two patients per half-day for the first three weeks. (60 patients in three weeks).
3. With patients consent, interviews are video recorded. Students are given time each week to review and catalog video recordings with one another and with faculty.

4. During the fourth week of the course, students are given time (and a computer) to create a video essay examining their baseline skills, growth and mastery. The students present this video essay to a seminar of students, residents and faculty.
5. During the fourth week of the course students are expected to create a "teaching video" for use in training other students, residents and faculty. The students determine the focus of the video in consultation with the POVE course director.
6. Course faculty evaluates students and students are asked to evaluate the course, including faculty performance.

Prerequisites: 4th year students who have taken core clerkships: Medicine, Pediatrics, OB/GYN, Psychiatry, Family Medicine and Surgery
Length of Program: 4 weeks
Maximum Number of Students: Two per rotation
When Offered: Rotations 5-10
Report to: Gail Marion, PA-C, Ph.D., William J. McCann, Psy.D

FORSYTH MEDICAL CENTER

These electives are restricted to Wake Forest University students only.

Forsyth Medical Center electives will be finalized after the initial scheduling process. Preceptors will then be notified of a student's desire to work with them and asked if they will be able to accommodate that student during the rotation requested. If it is not possible, other elective arrangements will be coordinated through the Medical Education Office at Forsyth Medical Center and the Office of Student Services. NO CHANGES CAN BE MADE IN THESE ELECTIVES ONCE THEY ARE SCHEDULED.

FOR01 Cardiology – Clerkship

Coordinator: Elms Allen, M.D.

Program Outline: Preceptor training on the private services of Winston-Salem Cardiology or Forsyth Cardiology. The patients are generally cardiac patients. These services represent a good overview of the specialty-oriented internist in a community hospital. Rounds are made daily. Cardiac catheterization and other invasive and non-invasive procedures are done.

Objective: Close contact with well-trained practicing cardiologists that are oriented to teaching.

Prerequisites: Must be signed up through the Office of Student Services and will be coordinated by that office with Dr. Allen. Student may select one of the above practices. If student has no special choice, one will be assigned.
Length of Program: 4 weeks
Maximum Number of Students: 1 per physician (5 physicians) per rotation
When Offered: All Rotations
Report To: Call Student Services at 716-4271 for instructions.

FOR04 Gastroenterology – Clerkship

Coordinator: Elms Allen, M.D.

Program Director: Mike Rubin, M.D.

Program Outline: Preceptor training on the private service of Salem Gastroenterology (Drs. Rubin and Peters) or Landon Weeks whose practice is limited to Gastroenterology. Teaching rounds are made daily.

Objectives: Experience in the entire field of Gastroenterology including esophagoscopy, gastroscopy, duodenoscopy and colonoscopy.

Prerequisites: Must be signed up through the Office of Student Services and will be coordinated by that office with Dr. Allen.
Length of Program: 4 weeks
Maximum Number of Students: 3 per rotation
When Offered: All Rotations
Report To: Call Student Services at 716-4271 for instructions.

FOR05 **Hematology/Oncology - Clerkship**

Coordinator: Elms Allen, M.D.

Program Outline: This four-week elective will be in the Forsyth Regional Cancer Center and will include seeing both outpatient and hospitalized patients with hematologic and oncologic problems. Students may request assignment to the service of either Drs. Eugene Paschold, Tom Grote, Nick Chrysson; Richard Brodkin, or Judy Hopkins.

Objectives: To teach the student an approach to the common hematologic problems and the management of more difficult and unusual problems in the field.

Prerequisites: Fourth year students must be signed up through the Office of Student Services and will be coordinated by that office with Dr. Elms Allen.
Length of Program: 4 weeks
Maximum Number of Students: 2 per rotation
When Offered: All Rotations
Report To: Call Student Services at 716-4271 for instructions

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FOR06 **Preceptorship**

Coordinator: Elms Allen, M.D.

Program Outline: A preceptorship is offered with specific physicians of the Staff of Forsyth Medical Center arranged by the Director of Medical Education (Dr. Elms Allen) on any of the following services: Medicine, Surgery, Pediatrics, Urology, Neurosurgery, E.N.T., Rehabilitation Medicine, or others. If a student knows a particular physician he would like to have as a preceptor, he must sign up through the Office of Student Services, who will, in turn, make the necessary arrangements through Dr. Allen's office.

Objective: To offer a clinical experience on any of the services under the direction of a qualified and interested physician in the community hospital setting.

Prerequisites: Prefer fourth year students.
Length of Program: 4 weeks
Maximum Number of Students: 1 per physician per rotation
When Offered: All Rotations
Report To: Call Student Services at 716-4271 for instructions

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FOR07 **Pulmonary Medicine – Clerkship**

Coordinator: Elms Allen, M.D.

Program Outline: This four-week elective is available to fourth year medical students who desire experience in Intensivist Medicine/Pulmonary Disease. The rotation includes outpatient and inpatient experience. The student should expect to improve his/her skills in the performance of history and physical examinations, evaluation of chest radiographs, interpretation of pulmonary function tests and arterial blood gas data, and the assessment and management of general medical problems. Additionally, students will have the opportunity to observe a variety of invasive procedures routinely performed by pulmonary specialists such as endotracheal intubation, mechanical ventilation, Swans Ganz catheterization, fiberoptic bronchoscopy, transthoracic needle aspiration, and closed pleural biopsy.

Objective: To expose the student to medical problems encountered within the specialty of Intensivist Medicine/Pulmonary Disease.

Prerequisites: The rotation must be coordinated through the Office of Student Services and Dr. Elms Allen.
Length of Program: 4 weeks
Maximum Number of Students: 1 per rotation
When Offered: All Rotations
Report To: Dr. Tom Hinson at Salem Chest Specialists at 765-0383.

FOR08 Introduction to Rehabilitation Medicine

Coordinator: Elms Allen, M.D.

Program Outline: Clinical clerkship offered at a 44-bed inpatient facility. Duties include supervised evaluation and management of inpatients. Students attend daily rounds, as well as team meetings and family conferences. Outpatient follow-up clinic, amputee clinic, rheumatology clinic, and EMG's/NCV's are also available. Topics to be covered include musculoskeletal and neurological exams; multidisciplinary team management of stroke, spinal cord injury, closed head injury; outpatient rheumatology, prescription of outpatient orthotics/prosthetics, and review of Internal Medicine.

Objective: The goal is to offer an introduction to physical medicine and rehabilitation.

Prerequisites: The rotation must be coordinated through Student Services and Dr. Elms Allen.
Length of Program: 4 weeks
Maximum Number of Students: 2 per rotation
When Offered: All Rotations
Report To: Dr. McLean. Call Student Services at 716-4271 for instructions

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INTERNATIONAL HEALTH CARE

IHC01 **International Health Care Rotations**

Program Directors: Gregory Waters, M.D. and Susan Williams, M.D.

Program Outline: This experience offers the student an opportunity to study and participate in a health care delivery system in a culture different from our country (such rotations may take place in either an industrialized or non-industrialized society) and to assess the environmental, cultural, economic, educational and political factors affecting health in that culture or country.

The Office of International Health Affairs, will assist the medical student in determining area, type of rotation and location on an individual basis. This includes those students with an interest in medical missions.

Mandatory – All students wishing to complete an international healthcare rotation must purchase evacuation insurance and show proof of insurance to the Office of the Registrar/Student Services one month prior to the start of the rotation.

Prerequisites: Satisfactory completion of Year 3
Length of Program: 8 weeks (maximum).
When Offered: All Rotations.
Arrangements should begin in junior year.

MEDICINE

Requests from outside student for Medicine electives should be made as follows:

1. General information concerning available electives - send requests to Office of Student Services, Wake Forest University School of Medicine (preferably in writing):
2. When elective is decided upon, request application forms from Office of Student Services; they will be mailed to you:
3. Return application forms along with letter from your Dean with the school seal stating you are a student in good standing and a letter of recommendation from a senior faculty member that you have worked with during your clinical rotations:
4. Final notification will be sent after the above have been completed and approval from the preceptor in the Department of Medicine has been received.

MED02 Cardiology-Clerkship-Emphasis in Diagnostic, Preventive and Rehabilitative Cardiology

Program Director: Killian Robinson, M.D.

Program Outline: Students will work in the Preventive and Rehabilitative Program at Wake Forest University Baptist Medical Center through Wake Forest University School of Medicine three mornings per week, reviewing exercise tests and rehabilitative plans for the patient, learning the techniques of cardiac rehabilitation and secondary prevention, dietary and psychological assessment and therapy, patient staffing and goal setting.

Students will also work in the outpatient office setting, evaluating patients with various cardiac problems, discussing history and physical findings, diagnostic studies and patient management with their preceptor. Emphasis will be placed on long term care and primary and secondary prevention. Time will be available for the students to review the diagnostic studies in the hospital Exercise Testing and Ultrasound Labs with the Echocardiograph staff.

Objectives: The student will:

1. Be able to obtain a history, perform a physical examination and organize the clinical information obtained for presentation and analysis.
2. Be able to discuss the appropriate diagnostic studies and therapeutic plans for the patients evaluated.
3. Be able to present an organized rehabilitative plan for patients after myocardial infarction and those with other cardiovascular problems.
4. Be able to discuss the concepts of both primary and secondary prevention of cardiovascular disease and outline a specific preventive program for selected patients.
5. Understand the physiologic changes associated with exercise and the mechanism by which this improves the functional status of patients with cardiovascular disease.
6. Obtain experience with ECG interpretation on Tuesday or Wednesday each week.
7. Be familiar with the use of exercise testing and echocardiography.
8. Develop the ability to appropriately evaluate and treat cardiovascular problems in the Outpatient setting.
9. Attend Conferences:
   a. Med Grand Rounds (Thurs, 8am)
   b. Cardiology (Mon, 4pm)
   c. Research (Wed, 4pm)

Prerequisites: Completion of Years 1-3

Length of Program: 4 weeks
Maximum Number of Students: 2 per rotation
When Offered: All rotations
Report To: Section of Cardiology, 1st Floor, Watlington Hall. Please call or stop by Dr. Robinson's office a day or two before beginning the rotation to receive further instructions.

MED04 Endocrinology – Clerkship

Program Director: Larry Cantley, M.D.

Program Outline: The student sees consultations referred to the Endocrinology service from other hospital services and participates in daily consultation rounds on the Endocrinology service. He/she attends the regularly scheduled endocrine conferences and will also work in the Endocrine Clinics with the attending physician. His/her time is otherwise devoted to guided reading, appropriate to the subject, and informal discussion.

Objectives: The educational goals of the Endocrinology elective include development of the ability to independently evaluate, treat and monitor common endocrine disorders (diabetes, thyroid dysfunction, lipid abnormalities and metabolic bone disease) and to be familiar enough with the less common endocrinopathies (adrenal disease, pituitary disease, gonadal dysfunction and calcium disorders) to be able to recognize the abnormality and initiate evaluation prior to sub-specialty consultation.

These goals will be accomplished through the student's participation in Endocrinology outpatient clinics and involvement in the Endocrinology inpatient consultation service (which includes a key role for the student in the initial evaluation and assessment of patients with endocrine disorders, the daily monitoring of the patient's course and progress, and appropriate communication with the primary physician). Completion of all reading from an assigned reading list is an essential expectation of the rotation, as well as participation in a weekly Endocrine conference.

The student will meet daily with the Endocrinology consult team, and will have ongoing evaluation and feedback from the supervising attending regarding fund of knowledge, clinical abilities, understanding of key concepts in the specialty, and achievement of the goals of the rotation.

Prerequisites: Completion of Years 1-3
Length of Program: 4 weeks
Maximum Number of Students: 2 per rotation
When Offered: All Rotations
Report To: Section on Endocrinology, E Floor, Nutrition Building, at 8:00 am

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MED05 Gastroenterology – Clinical Clerkship

Program Director: Joel Bruggen, M.D.

Section Faculty: John Gilliam, M.D.; Joel Bruggen, M.D., Richard B. Weinberg, M.D.; Richard Bloomfeld, M.D., John Baillie, M.D., John D. Long, M.D., John Conway, M.D., MPH, Girish Mishra, M.D., Nyree Thorne, M.D., Kenneth Koch, M.D. and Jerry Evans, MD.

Program Outline: Students will participate in the didactic, clinical, and procedural activities of the Gastroenterology Section. These will include attendance at case review, radiology and GI pathology conferences, active participation on the GI consult service, and observation of the endoscopic procedures in the GI Endoscopy Unit.

Objectives: The students will acquire a working knowledge of the pathophysiology and pathology of both common and unusual disorders encountered in a busy academic GI practice. Students will learn to perform a history and physical examination targeted to the digestive tract and will develop

skills in the differential diagnosis of digestive diseases. Students will also acquire familiarity with common GI diagnostic procedures. Students will be supervised at all times by the faculty and fellows of the GI section.

Prerequisites: Completion of Years 1-3
Length of Program: 4 weeks
Maximum Number of Students: 2 per rotation
When Offered: All Rotations
Report To: The Section of Gastroenterology, E Floor, Commons Building at 8:00 am.

MED06 Hematology/Oncology – Clerkship

Program Director: Denise Levitan, M.D.

Program Outline: The purpose of the rotation is to expand the exposure of the student to hematology and oncology. The student will meet with the course director before beginning the rotation and will develop a list of study goals to be achieved during the rotation. The student schedule will reflect the study goals and will include clinical experience in hematology and oncology as well as scheduled time in selected areas of interest including radiation oncology, blood banking, cytology, and pathology.

The student will work primarily in the outpatient clinical offices located on the 3rd Floor of the Outpatient Comprehensive Cancer Center (OCCC). Days of clinical work in outreach clinics may be scheduled for specific students. Each student will work a minimum of 8 half days in the areas of specific study and will have 2 half days to complete the clinical work in follow up and do further reading in the clinical areas. Clinical supervision will be divided among different faculty in order to provide wide exposure to the study field. Two books will be provided for each student at the beginning of the rotation.

The student will be expected to attend the following conferences:

Monday, 12:00 Noon	Oncology Core Curriculum Lectures Radiology Conference Room – 2nd Floor, Meads Hall
Wednesday, 12:00 Noon	2nd & 4th each month, Hematopathology Conference Pathology Conference Room 4 – 2nd Floor, Watlington Hall
Thursday, 8:00 am	Internal Medicine Grand Rounds Commons Conference Room 1,2 – G Floor, Nutrition Building
Friday, 12:00 Noon	Tumor Board Conference Radiology Conference Room – 2nd Floor, Meads Hall

Prerequisites: Completion of Years 1-3; permission of Program Director
Length of Program: 4 weeks
Maximum Number of Students: 1 student per rotation
When Offered: All Rotations
Report To: Contact Program Director

MED07 Infectious Diseases – Clerkship

Program Director: Vera P. Luther, M.D.

Program Outline: A clinical experience in infectious and inflammatory diseases is provided by the faculty of the division which includes Drs. Bachmann, Barroso, DeComarmond, High, Kalathoor, Luther, Nunez, Ohl, Peacock, Pegram, Sherertz and Wilkin. Patients seen in consultation are evaluated by the student and presented both to advanced trainees and attending staff. Specific

educational material is provided as are both formal and informal seminars. Work rounds are made daily. An educational outline is below.

Objectives: General objectives of the elective experience are as follows:

1. To further refine one's basic skills of history-taking and physical examination.
2. To develop an ability to identify and focus upon infectious disease problems and aspects of patient management.
3. To enhance one's abilities at succinct and concise oral presentations.
4. To gain a working knowledge of available antibiotics, especially their in vitro spectrum of activity and adverse effects.
5. To develop an understanding of the proper role of the microbiology lab in diagnosis and the proper interpretation of microbiologic data.
6. To recognize basic infectious disease clinical syndromes and to begin developing an approach to etiologic diagnosis.

Prerequisites: Completion of Years 1-3
Length of Program: 4 weeks
Maximum Number of Students: 2 per rotation
When Offered: All Rotations
Report To: Section on Infectious Diseases 3151, Gray Building at 8:00 am

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MED08 Infectious Diseases – Clerkship
Moses H. Cone Memorial Hospital, Greensboro, NC
An Affiliate of UNC-Chapel Hill School of Medicine

Program Directors: Timothy W. Lane, M.D.; John F. Campbell, M.D.; Jeffrey Hatcher, M.D. David Fitzgerald, M.D and Cornelius Van Dam, M.D.

Program Outline: This elective enables the student to observe the full range of clinical infectious diseases under the direction of Drs. Timothy Lane, John Campbell, Jeffrey Hatcher, David Fitzgerald, Cornelius Van Dam, all who are hospital-based infectious disease clinicians/teachers and faculty of UNC-Chapel Hill. The core of the experience will be consultations on hospitalized patients at Moses Cone Hospital (no night call, M-F). The student will receive teaching from the attending on daily attending rounds and didactic lectures designed to review and update the major topics in clinical infectious diseases. The student will examine and present new patients to the attending and will be expected to follow the progress of such patients through daily "work" rounds. A monthly infectious diseases conference will be the joint responsibilities of the student, the medical resident, and the attending.

Moses Cone also offers rotations in various areas including neurology, endocrinology, gastroenterology, etc. Contact WFUSM Office of Student Services for information.

Prerequisites: Completion of Year 3 and by arrangements with the instructor
Length of Program: 4 weeks
Maximum Number of Students: 2 per rotation
When Offered: All Rotations
Report To: Program Director at 8:30 am, Moses H. Cone Memorial Hospital, Greensboro, North Carolina

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MED09 Nephrology – Clerkship

Program Director: Barry Freedman, M.D.

Program Outline: This elective is intended for the student with a special interest in Nephrology or the student who feels he/she needs to improve his knowledge of Nephrology. Students work one-

on-one with the consultation fellow and renal attending. They are able to attend out-patient renal clinics and work one-on-one with faculty in order to improve their knowledge of outpatient nephrology. The rotation can be tailored to the student's particular interests.

Objectives:

1. The student will be able to organize complicated clinical information for analysis.
2. The student will be able to analyze complex electrolyte and acid-base problems, offer a differential diagnosis and propose a rational diagnostic and treatment plan. The student will be able to present this information in a clear and concise fashion.
3. The student will be able to write a concise and helpful consultation note which:
   a. Identifies the problem to be addressed
   b. Provides a differential diagnosis, in order of descending probability
   c. Proposes specific recommendations
   d. Lists helpful references from the literature, where appropriate.
4. The student will understand the differential diagnosis and management of cardinal problems in nephrology:
   a. Acute renal failure
   b. Chronic renal failure
   c. Acute glomerulonephritis
   d. Interstitial nephritis
   e. Toxic nephropathy
   f. Hypertension
   g. Pharmacokinetics in renal failure
5. The student will be exposed to the fundamentals of renal replacement therapy, including:
   a. Placement of vascular catheters for institution of hemodialysis
   b. Fundamentals of hemodialysis, peritoneal dialysis, and continuous veno-venous hemofiltration
   c. Management of the patient on dialysis.
6. The student will learn to solve problems and answer questions independently by exposure to the medical literature. This will occur under the close supervision of the nephrology faculty, renal fellows, and medical house staff. Use of computerized databases for searching the medical literature will be performed.

Prerequisites: Completion of Years 1-3
Length of Program: 4 weeks
Maximum Number of Students: 2 per rotation
When Offered: All Rotations
Report To: Section of Nephrology, G Floor, Watlington Hall at 9:00 am

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MED10 Geriatrics - Preceptorship

Program Director: Jamehl L. Demons, M.D.

Program Outline: Centered in the J. Paul Sticht Center on Aging and Rehabilitation, this elective exposes students to the principles of Geriatric Medicine and Gerontology through direct patient care, and interaction with research participants within studies headed by the section on Gerontology and Geriatric Medicine. The goal of this rotation is to understand the levels of care options for the aged and learn to provide them with the best quality of care.

Objectives:

1. The student will participate in the care of elderly persons across different venues and levels of care to include any or all of the following:
   a. Outpatient care of well and frail elderly
   b. Long-term care
   c. Transitional care

d. Physician's Home Care Program whose goal is to provide medical care to homebound elderly who would otherwise have limited access to comprehensive healthcare.
e. Comprehensive geriatric assessment that includes cognitive, functional and overall medical assessment of outpatients

2. The student will gain exposure to clinical investigation by observation of patient encounters across the breadth of clinical studies headed by the section on Gerontology and Geriatric Medicine.
3. The student will understand the differential diagnosis and management of common geriatric syndromes.
   a. Dementia and delirium
   b. Depression
   c. Falls
   d. Incontinence
   e. Sensory impairment
   f. Polypharmacy

MED12 Pulmonary Critical Care Consult Service

Program Director: Arjun Chatterjee, M.D., M.S.

Faculty: Drs. Norman Adair, Edward Haponik, Robert Chin, John Conforti, R Duncan Hite, Rodolfo Pascual, Wendy Moore, Jill Ohar, Stephen Peters, Eugene Bleecker, and Peter Morris.

Program Outline: This elective involves evaluation and management of patients referred to the Pulmonary/Critical Care Consultation Service. Components of the experience will include:

1. Pulmonary Consultation Service: The student will evaluate Pulmonary/Critical Care consultations with the Pulmonary Fellows and Attending Physician, participate in consult service rounds and contribute actively in the ongoing follow-up care of patients on this service.
2. The student will obtain experience in the Pulmonary Function Laboratory, primarily in the interpretation and application of basic pulmonary function studies essential to the ambulatory practice of Pulmonary Medicine. The student may also learn about the roles of specialized studies (e.g., pulmonary exercise testing, dyspnea evaluations, sleep studies, and evaluation of lung mechanics in Intensive Unit Care patients).
3. As part of the Consult Service activities, the student may learn the principles of mechanical ventilation and will become familiar with the practical use of this technology in patient management.
4. The student may participate in the Pulmonary Fellow's Outpatient Clinic and in the Pulmonary Attendings Clinic. This ambulatory experience will be tailored according to the needs and interests of the student. The Downtown Health Plaza Pulmonary Clinic is also available as an educational resource.
5. The student will have first-hand exposure to the basic procedures used in the evaluation of patients with pulmonary disease (e.g. chest roentgenogram, chest computed tomography and pulmonary function testing interpretation, flexible bronchoscopy and other pulmonary procedures as patient care indicates), participate in decisions regarding the use of these procedures, and develop understanding about the indications, risks and benefits related to their appropriate application.
6. The student will participate in all weekly didactic conferences offered by the Pulmonary/Critical Care Section.
7. A required reading list, including the Pulmonary/Critical Care Primer will be provided to each student at the beginning of the rotation with additional reading appropriate for specific patients being managed by the student.
8. Supplemental texts and references will be provided by the Pulmonary/Critical Care Section.
9. The student will participate in the Pulmonary Consult Lecture Series with the residents on service. This lecture series is provided by several different members of the faculty.

Objectives: To gain a critical understanding of Pulmonary/Critical Care Medicine: through first-hand participation in the care of patients with a spectrum of disease, the student will obtain perspectives on the pathophysiology of respiratory illness and acquire experience in practically-oriented approaches to clinical management.

Prerequisites: Completion of Years 1-3
Length of Program: 4 weeks
Maximum Number of Students: 2 per rotation
When Offered: All Rotations
Report to: Dr. Arjun Chatterjee, 3117 Gray Building. Pulmonary and Critical Care.

MED13 Cardiology – General Cardiology Consult Service

Program Director: Robert J. Applegate, M.D.

Program Outline: The Cardiology Consult Service will provide the student with experience in the evaluation and management of a wide variety of patients on non-cardiology services. This will include but will not be limited to pre-operative evaluation of patients with suspected or known cardiac disease or patients felt to be at high risk for having cardiac complications of their non-cardiac surgery. In addition, during the rotation the students will be able to gain an understanding of cardiac diagnostic testing including electrocardiography, echocardiography, stress testing, nuclear imaging and cardiac catheterization. The students will be able to participate in the Cardiology Conference schedule provided by the Cardiology section including a Clinical Cardiology Conference, an Interventional Conference, A Research Conference, and a Non-Invasive and Journal Club Conference.

Objectives: To understand basic cardiac pathophysiology, to be able to assess the cardiac risk of patients undergoing non-cardiac surgery, and to gain a basic understanding of cardiac diagnostic evaluation.

Prerequisites: Completion of Year 3
Length of Program: 4 weeks
Maximum Number of Students: 3 per rotation
When Offered: All Rotations
Report To: Contact program director's office for Cardiology attending of the rotation.

MED14 Rheumatology – Clerkship

Program Director: Kenneth S. O'Rourke, M.D.

Program Outline: The student will become an integral member of the Rheumatology consult and clinic service. S/he will attend the rheumatology clinics under the supervision of the faculty and rheumatology fellows, and see inpatient consultations. The student will have responsibility for initial evaluations and assessments on new patients, as well as return patients, and will have the opportunity to perform procedures including arthrocentesis and synovial fluid crystal analysis. The clinical services are complemented by weekly Sectional conferences, readings, other educational materials and time devoted to self-directed learning.

Objectives: Following the completion of the rotation, the student should be better able to:

1. Obtain a complete history and perform a thorough musculoskeletal examination on patients suspected of having a rheumatic disease.
2. Appropriately order or perform commonly used diagnostic tests, and interpret lab data, including acute Year reactants, autoantibodies, synovial fluid analysis, and selected imaging examinations.
3. Aspirate and/or inject selected joints and bursae.
4. Define the differential diagnosis and approach to the patient with common musculoskeletal syndromes, including mono- and polyarticular complaints, myalgias, back pain, carpal tunnel syndrome, and regional periarticular syndromes (e.g., bursitis, tendonitis).
5. Describe the clinical findings and approach to treatment of the common arthritides (RA, OA, crystalline diseases), connective tissue diseases (SLE, myopathies, scleroderma), and vasculitides.

Prerequisites: Completion of Years 1-3
Length of Program: 4 weeks
Maximum number of students: 1 per rotation
When Offered: All rotations except Year 4-7 and Year 4-9.
Report to: Dr. O'Rourke's office at 8:30 am, 3rd Floor Watlington Hall in the Section on Rheumatology and Immunology administrative offices.

MED16 Hospice and Palliative Care Clerkship

Program Director: Richard C. Stephenson, M.D.

Program Outline: This elective is intended for all students who have an interest in improving their end-of-life care skills. Students will become part of the interdisciplinary team at the Kate B. Reynolds Hospice Home under the direct supervision of the Hospice and Palliative Care Center physician. Students will have primary patient responsibilities similar to an acting intern on any medical service, working up new patients at the time of admission and rounding daily. Students will also have the opportunity to spend some of their time with the Palliative Care Consult Service at Wake Forest University Baptist Medical Center.

Objectives:
1. Enhance communication skills particularly those necessary in delivering bad news, establishing goals of care, and conducting a family conference
2. Gain understanding of the pathophysiology of end-stage disease and proficiency in determining prognosis
3. Develop skills in pain and symptom assessment and management
4. Work closely with mid-level practitioners and function as part of an interdisciplinary team
5. Research an area of interest in end-of-life care and prepare a PowerPoint presentation.

Prerequisites: Completion of Year 3
Length of Program: 4 weeks
Maximum number of students: 1 per rotation
When Offered: All rotations
Report to: Richard C. Stephenson, M.D. at the KBR Hospice Home, 760-1114

NEUROLOGY

Requests from outside students for Neurology electives should be made through the Office of Student Services, Wake Forest University School of Medicine. A written request should be sent, which will be subject to approval by the course director.

NEU01 Neurology Outpatient Clinic Elective

Program Director: James B. Caress, M.D.

Program Outline: Outpatient evaluation and management of neurological complaints is often challenging for physicians. Performance of simple exam skills and knowledge of a few clinical pearls make it much easier to manage these patients in an efficient and cost effective manner. In the private outpatient clinic, students will work directly with attending physicians of their choosing and learn how to manage a broad range of outpatient neurological problems including headaches, dizziness and vertigo, stroke rehabilitation, cerebrovascular disorders, epilepsy, multiple sclerosis, myasthenia gravis, peripheral neuropathy, ALS, Parkinson's disease, and dementia. Students will design their own schedules according to their interests. The first week, students will concentrate on learning to perform a reliable neurological exam and may function as observers for a few days. Following this brief apprenticeship period, the student will be the primary historian and examiner and will discuss the case and review the exam findings directly with the attending physician. Students will work with a total of 4-5 different attending physicians over the month and are encouraged to attend the resident level neurology conferences. Evaluations will be returned by the individual attending physicians and collated for a final grade. This elective can be combined with the inpatient neurology consult elective.

Objectives: To develop efficient processes for the evaluation of neurological complaints and for the performance of the neurological exam.

Prerequisites: Completion of Year 3 Neurology clerkship
Length of Program: 4 weeks
Maximum Number of Students: 2 per rotation
When Offered: All Rotations
Report To: Dr. Caress one week in advance to set up your clinic schedule.

NEU02 Inpatient Neurology Consults

Program Director: James B. Caress, M.D.

Program Outline: This elective is ideal for the budding intensivist, hospitalist, ER physician or surgeon who will frequently run across strokes, metabolic encephalopathies, seizures, and neurologic complications of patients hospitalized for non-neurologic indications. In this setting, students will work with upper level neurology residents and, eventually, function independently to evaluate patients on the busy consult service. Students will present their findings directly to the consult attending who will review the case with them. Appropriate supervision will be provided. There will be ample time to review the relevant literature prior to presenting these cases and students are encouraged to attend the resident level neurology conferences. This elective can be combined with the outpatient neurology clinic elective (NEU01).

Objectives: To learn how to evaluate and manage critically ill patients with concomitant neurological problems.

Prerequisites: Completion of Year 3 Neurology clerkship
Length of Program: 4 weeks

Maximum Number of Students: 2 per rotation
When Offered: All Rotations
Report To: Dr. Caress 1 week prior to starting elective.

NEU03 Pediatric Neurology

Program Director:Annette Grefe, M.D.

Program Outline: This elective provides four to eight weeks of experience in both the common and unusual neurologic diseases of children and adolescents through extensive faculty-student interaction, instruction and reading.

The student will work under the direct supervision of the attending pediatric neurologist in the outpatient clinics and will participate in the care of inpatients and in consultations. The student will gain insight into the clinical evaluation and management of such common pediatric neurologic problems as epileptic seizures, headache, developmental delay, behavioral disturbance, neoplasms and neuromuscular disease. In addition to supervised participation in patient care, instruction is provided through faculty-student discussions, resource material and basic reading material. The student will also gain a basic understanding of diagnostic studies useful in Neurologic disorders such as the electroencephalogram, computed cranial tomography and magnetic resonance imaging. Time will be provided for reading, and the student will be encouraged to attend the academic Neurology conference and the Child Neurology conference every other Thursday as well as other appropriate conferences. Research projects are available, but optional.

Objectives: The student will:
1. Learn the basics of the neurologic examination of children.
2. Acquire basic skills and knowledge in the diagnosis and management of common pediatric neurologic disorders such as epilepsy, headache, developmental disorders (including cerebral palsy, mental retardation and learning problems), brain tumors, metabolic and hereditary disorders.

Prerequisites: Approval by Dr. Grefe
Length of Program: 4-8 weeks
Maximum Number of Students: 2 per rotation
When Offered: All rotations
Report To: Dr.Annette Grefe, Department of Neurology, 3rd Floor, Meads Hall at 9:00 am, pager 806-8842

NEU04 Rehabilitation Medicine Elective

Program Director: Martin Childers, D.O., Ph.D.

Program Outline: This elective offering can be chosen as an acting internship. Rehabilitation Medicine seeks to improve physical, functional and psychosocial abilities in persons with disabilities. This rotation offers students the opportunity to spend the rotation either on the Inpatient Rehabilitation Service at the Sticht Center, or an outpatient clinical experience at Comp Rehab Plaza and the Clinical Science Building. The students on the inpatient rotation will serve in the acting intern capacity. Types of conditions seen are primarily neurological and include stroke, brain injury, spinal cord injury and multiple sclerosis. Students may design their own schedules according to their interests and may combine inpatient and outpatient experience. They will have the opportunity to work with a variety of different attending physicians. During the rotation, students are encouraged to participate in the Rehabilitation Medicine Journal Club and other conferences. Prior to beginning the rotation, a meeting with Dr. Childers is suggested to assure that the experience addresses the career goals of the student.

Objectives: To provide the student with a general overview of rehabilitation medicine with special emphasis on neurological conditions.

Prerequisites: Completion of Year 3 Neurology clerkship
Length of Program: 4 weeks
Maximum Number of Students: 2 per rotation
When Offered: All rotations
Report To: Dr. Childers one month in advance to set up rotation elective schedule

Research opportunity in Neurology; see NCE10 and NCE11 on page 79-80.

NON-CLINICAL ELECTIVES

These rotations may be taken only by fourth year Wake Forest medical students. An individual may take any one of the following electives. Students wishing an additional elective in this category must receive special permission from the Dean's (or their designee) approval.

NON-RESEARCH

NCE01 Health Care for Underserved Populations

Program Directors: Vernon Ross, M.D. and John Thomas, M.D.

Program Outline: This elective will provide students with an overview of the critical factors that impact the health of underserved populations.

Objectives: Upon completion of the elective, a student will be able to:
1. Discuss the economic and cultural factors impacting the health of underserved populations
2. Identify the specific health care problems faced by underserved populations

Requirements:
Field experience: The student will participate in a practical field-based experience that must be approved in advance by the course directors. A mandatory 1-hour informational meeting will be held in the fall prior to the proposed travel to outline course objectives and requirements. Each student must submit a proposal to the Registrar's Office by May 1 containing the following information:
1. Location where field-experience will be completed
2. A brief (paragraph) description of what the project will be
3. Duration of field experience (must be 1-4 weeks of active participation at the field site)
4. Contact information of supervising physician at field location
5. Emergency US contact information: name, address, phone, relationship to student

Approval to participate in the elective will be granted by course directors on or before June 1. If the project will involve international travel, proof of medical evacuation insurance must be submitted to the Registrar's office prior to travel or credit will not be received.

Paper: Once the field experience is completed, each student will write an 8-10 page paper, typed and double-spaced including at least 3 references from the medical literature. The paper should briefly describe the field experience and focus on a major health issue of the community studied (for example HIV infection in Africa, child malnutrition in Latin America, alcoholism in the US homeless population). List the primary barriers to the access and provision of healthcare and conclude by listing three things learned from the experience that were different from initial expectations. The paper will be due by September 30 of the year of travel.

Seminar: Two 1 hour seminars will be required. The first session prior to proposal submission will be informative, about rotation requirements and proposal submission. The second session will be an experience discussion and debriefing session. Three student papers (Honors grades) are to be presented by students using Power Point presentation with an open forum discussion to follow. One seminar will be scheduled before and one after the field experience

A final grade will be issued following the post trip seminar.

Prerequisites: Year 1
Length of Program: 4 weeks
Maximum Number of Students: Open
When offered: As approved by the course director

NCE 02 Medical Education Elective

Course Director: Ann Lambros, Ph.D., Assistant Dean for Education and Director, Center of Excellence for Research, Teaching, and Learning

Course Description: Students will work with educational specialists and faculty to achieve one or more of the following objectives: deepen their understanding of educational theory; advance their teaching skills; design educational materials for use with medical students in preclinical and clinical settings; conduct educational research. Students will be expected to produce evidence of their time effort commitment equivalent to 40 hours per week of the rotation. Proposals for this rotation must be made in advance of an anticipated start date.

Potential Course Objectives:

- Students will be able to discuss teaching/learning strategies related to learning objectives.
- Students will be able to discern distinctions between educational theory and practice.
- Students will demonstrate skill in creating educational materials.
- Students will design and execute an educational research project.

Prerequisites: completion of Year 3, Permission of Course Director.
Length of Course: 4 weeks
Maximum Number of Students: N/A
When Offered: Rotations 1, 5-11
Report to: Dr. Ann Lambros

NCE101 Narrative Medicine: The Lost Art of Listening to the Patient's Story

Program Director: Sonia Crandall, PhD, MS

Program Outline: This 4-week non-clinical elective course is designed to include reading, writing, and listening skills on multiple levels. The projects in the course will assist students in exploring the expanding, cutting-edge field of narrative medicine, and how the application of interpretive literary skills to the practice of medicine can effect wise and ethical action. The course will unfold in four stages: (1) the catastrophe of cacophony; (2) the voice of the medical professional; (3) the voice of the patient; and (4) the search for common ground. Expertise in the practice of narrative medicine directly increases the repertoire of experience to refine a medical practitioner's core communication skills as identified by the Kalamazoo Consensus conference (rapport building, agenda setting, active listening, information management, addressing feelings, and reaching common ground).

Objectives:

Stage 1: *The Catastrophe of Cacophony*

- To recognize the dilemmas inherent when medical professionals and patients/families do not communicate with a complete recognition of the multifaceted nature of the patient's story, resulting in compromised outcomes;
- To identify and explore factors contributing to that lack of communication, such as lack of trust, language barriers, lack of opportunity, lack of interpretive skills.

Stage 2: *The Voice of the Medical Professional*

- To recognize the difference between clinical and empathic, interpretive approaches to patient care, examining a variety of points of view and texts, such as case studies, history of present illness and past medical histories, and literary works.

Stage 3: *The Voice of the Patient*

- To identify the contexts where deep listening and narrative interpretation are critical and/or appropriate and
- To provide opportunities for developing empathic and interpretive listening skills.

Stage 4: ***The Search for Common Ground***

- To enhance the ability of the learner to get the story clearly and completely and
- To negotiate a mutual understanding between patient and health-care provider so that effective dialogue facilitates the best treatment and care.

Course Format

- Month-long rotation divided into the four theme-based, weekly segments identified above.
- Twice weekly seminar meetings from 9:00 am -12:00 noon and afternoon experiential assignments from 1:00-5:00 pm (twice weekly) including Thursday afternoon debriefing sessions with master clinicians; Fridays will be reserved for field trips and special events.

Student Assessment Plan

- Attendance and participation, which includes completing assigned readings
- Individual Portfolios to include selections of reflections, responses, writings, and interviews to be evaluated on a per learning contract basis and content analysis that reflect the WFUMS grading scale
- Pre- and Post- course assessment tools (empathy/attitude scales, narrative writing exercise, etc.)

Course Evaluation Plan

- Student and faculty assessment of core presenters and activities

Course Readings and Resources to include:

- literature such as *On Doctoring; Letters to a Young Doctor*; selected novels, poems, essays;
- films and art museums;
- invited speakers such as Lori Arlviso Alvord (Dartmouth Medical School), Ruth Hart (University of Syracuse), Paul Haidet (Baylor College of Medicine) and Grey Brown (Health Arts Network at Duke University Medical School)

Prerequisites: Completion of Years 1-3
Length of Program: 4 weeks
Maximum Number of Students: 10-12
When Offered: Rotation 12
Report To: Dr. Sonia Crandall, Family and Community Medicine, Piedmont Plaza I, 2nd Floor.

RESEARCH

These programs are designed to provide senior medical students an opportunity to participate in a research project in the specialty selected as their career choice. The student will work with a faculty sponsor to design a research project and benchmarks for successful completion based on the current research opportunities in each department. The structure and objectives of the rotation must be submitted with a letter of support from the faculty sponsor to the Registrar no later than 3 months prior to the start date of the rotation. The student will be notified by the Registrar of approval or denial of the rotation no later than 2 months prior to the start date of the rotation.

Examples of student participation for the research elective are: clinical trials, epidemiological studies, health services research projects, basic science research projects or writing of a case report.

Before beginning the research rotation, students are required to review the research protocol and study the pertinent literature. Students are expected to spend 40 hours per week working on their research project during their rotation. If the schedule for the research component permits, students are expected to attend grand rounds, journal clubs or any other section or department-wide didactic activity. At the end of the research rotation, the student will prepare a scholarly product, i.e., written report of his or her research, presentation at a department seminar, manuscript to be submitted, etc. The scholarly product is expected to be commensurate to the scope and duration (4 or 8 weeks) of the elective and to represent new effort in the field. Therefore, work done previously in the curriculum does not generate credit during this rotation.

Credit for the research elective will be contingent upon submission and approval of the scholarly product by the supervising faculty member. Credit for 4 weeks will be 4 hours and credit for 8 weeks will be 8 hours.

Objectives: To provide students with an opportunity to acquire basic knowledge of clinical and/or basic science research conducted in their specialty of choice.

Upon completion the student should be able to:

1. Describe the theory upon which the research question is based and to learn to develop a research question
2. Understand and be familiar with the ethics of clinical research and the steps necessary for approval by the Institutional Review Board which oversees human subject research
3. Describe how the findings from the research project could affect clinical management;
4. Describe the research design of the project;
5. Compare and contrast the research design used with others that might have been used;
6. Describe the statistical methods used to analyze the data;
7. Explain the results of the project;
8. Produce a scholarly product as defined above.

Prerequisites: Completion of all 3rd year clerkships and in good academic standing (see bulletin for definition of good academic standing). Limited to Wake Forest University School of Medicine students.

All students wishing to complete the Neurobiology and Anatomy Didactic and Research Elective, or who want to participate in research for periods that are greater than 4 weeks, need approval from the Dean of Education or the designated representative.

Length of Program: 4 or 8 weeks (if the rotation is approved for 8 weeks, no other non-clinical rotations will be allowed during the 4th year)
Maximum Number of Students: Dependent on Departmental Availability/Faculty Sponsor
When Offered: Review with faculty sponsor
Report To: Review with faculty sponsor

NCE05 Dermatology – Research

Program Director: Steven R. Feldman, M.D., PHD

Program Outline: The student with a special interest in dermatology will have an opportunity to initiate a small clinical research project during this rotation. It is possible that the student may wish to spend intermittent amounts of their own time after this four-week elective to complete a small project due to the nature of clinical investigation. In addition to patient exposure, collaborative efforts with various basic laboratories within the institution can be arranged.

The student will participate in a clinical research project related to cutaneous epidemiology or health services research. Many of the past projects involved analysis of existing datasets, systematic literature review, or small clinical trials. The student may work independently or with direct supervision depending on their abilities and experience. The student will be expected to participate in planning the research, to understand the literature/previous studies underlying the project, and to publish the results of his/her work.

Objectives: Upon completion of the course, the student will be able to:
1. Describe the background leading to their research project
2. List the methods used in their project and understand the limitations of these methods
3. Describe the results and statistics used in interpreting the results
4. Discuss the implications of their research findings

Prerequisites: Prearrangement with program director
Length of Program: Flexible. A minimum of four weeks is expected
Maximum Number of Students: 3 per rotation
Visiting Students: Visiting students are welcome
When Offered: All Rotations
Report To:
For Clinical Research: Dr. Steve Feldman, Ground Floor Watlington Hall
Dr. Alan Fleischer, Ground Floor Watlington Hall
Dr. Joseph Jorizzo, Ground Floor Watlington Hall
Dr. Amy McMichael, Ground Floor Watlington Hall

NCE06 Translational Science Institute Preceptorship
Program Directors: Charles McCall, M.D.; Sally Shumaker, Ph.D.; Greg Burke, M.D., M.Sc.; Kevin High, M.D., M.S.; Ann Geiger, Ph.D., M.P.H.; David Goff, M.D., Ph.D.; and Walter Ambrosius, Ph.D.
Program Outline: The student will gain an understanding of the rationale and characteristics of translational research and will be exposed to the design and implementation of a variety of translational research protocols in the clinical and/or community settings. Based on the student's interests and opportunities available at the time of the rotation, a flexible and varied experience will be designed for each student. The student may choose to work with a faculty mentor on research activities within one or more of the sections of the Clinical Research Unit: the Primary Clinical Research Unit, the Aging Unit, or the Acute Care Unit. Clinical focus areas may include: vascular disease, nutrition, cancer, neurobiology, infectious diseases, lipid metabolism, women's health, aging and disability, obesity, regenerative medicine, behavioral disorders, or substance abuse. The student may also choose to work with the Regional Community Translation (T2) Laboratory in practice-based research projects within the community to gain an understanding of how research is conducted in community practices/settings and how research findings can be successfully integrated into community practices to ultimately impact public health. Focus areas may include diabetes, cardiovascular disease, obesity prevention and management, preventive health, behavioral health, women's health, cancer, nutrition, and aging, among others. The student will also gain exposure to the value of team science to translational research and to the research support infrastructure which helps facilitate effective translational teams at WFUSM.
Objectives: The student will:
1) Articulate the unique attributes, challenges, and rewards of translational research.
2) Develop a mentoring relationship with a senior investigator participating in clinical and/or community research through the Translational Science Institute.

3) Participate in an active fashion in an ongoing clinical and/or community research protocol within the TSI Clinical Research Unit or Regional Community Translation Laboratory.
4) Gain an in-depth understanding of the clinical or community issues related to the research project chosen.

Prerequisites: Year 3
Length of Program: 4-8 weeks
Maximum Number of Students: 2 per rotation
When Offered: All Rotations
Report to: TBD

NCE07 Infection and Immunity – Research Experience

Program Directors: Luara Bachmann, M.D.; Luis Barroso, M.D.; Charles DeComarmond, M.D.; Kevin High, M.D.; Suneetha Kalathoor, M.D.; Vera Luther, M.D.; Marina Nunez, M.D.; Christopher Ohl, M.D.; James Peacock, M.D.; Samuel Pegram, M.D.; Robert Sherertz, M.D.; and Aimee Wilkin, M.D..

Program Outline: This elective is designed to give an in-depth research experience in infection and/or immunity. It should appeal mostly to those interested in pursuing this area of medicine in depth, particularly at an academic level.

This program is flexible. Areas of study include: infection control, catheter infections, antibiotic stewardship, sexually transmitted infections, HIV infection, viral hepatitis, aging immunity, innate immunity and immunocompromised hosts. Those interested must discuss their potential with Dr. Luther.

Objectives: An in-depth research experience in the fields of infection and immunity.

Prerequisites: Completion of Year 2
Length of Program: 4-8 weeks
Maximum Number of Students: 1 per rotation
When Offered: All Rotations
Report To: Dr. Luther's office, 3rd Floor, Gray Building

NCE08 Nephrology – Research Elective

Program Director: Anthony J. Bleyer, M.D., MS

Program Outline: Students participate in a specifically designed research project which combines clinical, epidemiologic research and a Nephrology-related area, such as end-stage renal disease, transplantation, chronic renal failure, or hypertension. With the help of a chosen faculty member, a project is designed, research is performed, and an abstract or a paper is prepared. During the month, students receive individual tutorials on aspects of clinical epidemiology and its relevance to Nephrology. The goal of this month is not only to carry out a research project but also to give the student a solid grounding in clinical epidemiology.

Objectives:
1. To learn the basics of clinical research by carrying out a research project from start to finish in the allotted time period.
2. To obtain a fundamental understanding of clinical epidemiology.
3. To have the opportunity to publish or present research results.

Prerequisites: Completion of Year 3
Length of Program: 4 weeks or 8 weeks
Maximum Number of Students: 2 per rotation
When Offered: All Rotations
Report To: Please contact Dr. Bleyer a month or two before starting elective to aid in planning.

NCE09 Neurobiology and Anatomy Didactic and Research

Program Director: Walter J. Bo, Ph.D.

Program Outline: The student selects the area to dissect, which is usually the area in which they will specialize. Students are required to make an oral presentation correlating the anatomy to a clinical problem.

Objectives: To strengthen the student's knowledge of anatomy within their specific area of interest prior to beginning residency.

Prerequisites: Completion of Year 3
Length of Program: 4 weeks
Maximum Number of Students: 6 per rotation.
When Offered: All Rotations

All students wishing to complete the Neurobiology and Anatomy Didactic and Research Elective, or who want to participate in research for periods that are greater than 4 weeks, need approval from the Dean of Education or the designated representative.

Requests from outside students for Neurobiology and Anatomy electives should be made initially through Dr. Walter J. Bo, Neurobiology and Anatomy at (336) 716-4475 and followed up through the Office of Student Services, Wake Forest University School of Medicine.

NCE10 Neurology Research Elective

Program Director: James B. Caress, M.D.

Program Outline: This elective is offered to those who wish to participate in a research project which will culminate in the preparation of an abstract or a short paper. Students will have discussed their interest in doing research with individual attending physicians in advance and a project will have been identified. Evaluation of the current literature, understanding of appropriate research protocols and instruction on scientific writing will be a critical part of this experience. Projects in neuro-ultrasonography, epilepsy and stroke have been the main thrust of this elective, but projects in other branches of neurology such as neuromuscular disease, MS, and pediatric neurology can also be considered. This elective can be combined with inpatient or outpatient neurology experiences if 8 weeks is reserved.

Objectives: To conduct thorough literature reviews, specific laboratory techniques, and write a scholarly work in scientific style.

Prerequisites: Planning session with individual attending physician
Length of Program: 4-8 weeks
Maximum Number of Students: N/A
When Offered: All rotations
Report To: Arrange with individual faculty preceptor

NCE11 Neurosonology Research

Program Director: Charles Tegeler, M.D.

Program Outline: The purpose of this elective is to introduce the student to the field of Neurosonology and facilitate completion of a specific short research project. Students will learn basic principles and clinical applications of ultrasound in neurology. Evaluation of current literature, research protocol and experimental work will be offered with instruction in research methodology. Depending on the project, a scientific paper will be prepared and scientific presentation encouraged.

Objectives: To conduct thorough literature reviews, learn principles and applications of ultrasound in neurology create a research protocol and write according to scientific conventions.

Prerequisites: This elective is available to fourth year students and must be scheduled in advance with Dr. Tegeler, Professor of Neurology at (336) 716-7668
Length of Program: 4-8 weeks
Maximum Number of Students: 2
When Offered: All rotations
Report To: Arrange with Dr. Tegeler

NCE12 Neurosurgery – Research

Program Director: Charles L Branch, Jr., M.D. and Waldemar Debinski, M.D., PhD

Program Outline: Research is being carried out both at a clinical and laboratory level in neurological surgery. The student will be aided and guided into various elective areas of research, either clinical or laboratory. Studies are being carried out in pharmacological manipulation of radiation injury to the CNS, molecular biology of seizure disorders, tumors affecting the central nervous system, motor and sensory circuits in human and primate brains, mechanisms and treatments of cerebral ischemia and CNS trauma, spine disorders and tools and techniques for their treatment as well as other clinical areas. Before beginning either clinical or laboratory research the student must have approval from a Neurosurgery clinical faculty or Dr. Debinski.

Objectives: Neurosurgery research

Prerequisites: Two years of medical school, although the interested student may begin non-credit work during his/her first two years.
Length of Program: 4-8 weeks
Maximum Number of Students: 2 per rotation
When Offered: All Rotations
Report To: The Office of Student Services, 3rd Floor, Watlington Hall @ 8:15 am

NCE13 Orthopaedic Surgery – Research

Program Director: Ethan R. Wiesler, M.D. and Beth P Smith, Ph.D.

Program Outline: This program is designed to provide the senior medical student an opportunity to participate in an Orthopaedic Surgery research project. After reviewing the student's interests and their prior experience, the student will be assigned a research project based on the current research opportunities in the department. There are a variety of ongoing clinical and basic science projects in the department that provide research opportunities for medical students. For example, the Department of Orthopaedic Surgery is involved in several long-term outcome studies that allow students to observe patients under orthopaedic management. Participation in these research studies allows students to observe patients before and after treatment at various time points. As part of the rotation, students also observe surgeons in the clinic and operating room. Research

opportunities in shorter-term clinical and basic science research projects that reflect the varied research interests of departmental faculty members also are an option.

Dr. Smith will work with students to identify an area of research participation and to coordinate the research with the appropriate faculty member. Before beginning the research rotation, the student will review the research protocol and study the pertinent literature. Students will be expected to spend 40 hours/week working on their research project during their rotation. At the end of the research rotation, students will prepare a summary of their research accomplishment to be maintained on file in the Department of Orthopaedic Surgery.

Objectives: To provide students with an opportunity to acquire basic knowledge of clinical and basic science methods used for research in Orthopaedic Surgery.

Prerequisites: Interview with Dr. Beth Smith; consent of program director
Length of Program: 4-8 weeks
Maximum Number of Students: 2 per rotation
When Offered: All Rotations
Report To: Dr. Beth Smith at 8:00 a.m., Dept. of Orthopaedic Surgery Research Laboratory, 5th Floor, Gray Building

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NCE14 Otolaryngology – Research

Program Director: J. Dale Browne, M.D.

Program Outline: This elective will be offered to those students seeking in-depth knowledge in selected areas of otolaryngologic research. After reviewing the student's interests, prior experience and aptitude, he/she will be assigned to one of the research projects currently in progress. The student will review the research protocol with the principal investigator, familiarize himself/herself with the pertinent literature and participate in the experimental aspects of the research project.

Objectives: The overall objective of this elective is to allow the student to acquire a basic knowledge in the development and implementation of a research project.

Prerequisites: Consent of Program Director
Length of Program: 4-8 weeks
Maximum Number of Students: 2 per rotation
When Offered: Student should contact the Program Director for availability prior to scheduling
Report To: The Department of Otolaryngology, 4th Fl, Watlington Hall at 8:00 am

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NCE16 Pediatric Oncology - Research

Program Director: Marcia Wofford, M.D.

Program Outline: Student will work with faculty in Pediatric Oncology to design and implement a clinical research study.

Objectives: To acquaint the student with development and implementation of a clinical research project and/or presentation of a case report.

Prerequisites: Year 3 Pediatrics
Length of Program: 4 weeks
Maximum Number of Students: 2 per rotation
When Offered: All Rotations
Report To: Program Director, 8:00 a.m., Dept. of Pediatrics, 2nd Floor, Watlington Hall

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NCE17 Plastic Surgery - Research Clerkship

Program Director: Lisa R. David, M.D. and Michael Morykwas, Ph.D.

Program Outline: This program is designed to provide the junior or senior medical student who has an interest in research an opportunity to participate in an active, original research program. The student will work closely with Dr. Michael Morykwas, Director of the Plastic Surgery Research Laboratories.

Objectives: To develop or participate in an area of research related to Plastic Surgery. Current projects underway include the investigation of angiogenesis, hemangiomas and other vascular neoplasms, the development of skin substitutes, new craniofacial treatment modalities, microvascular surgery and basic wound healing. Both clinical and laboratory projects are available. Individual projects in other areas will be considered depending on the experience and expertise of the student and the availability of funds.

Prerequisites: Students must apply directly to the Section Chief by application and interview. It is anticipated that the project undertaken for a period of a month will be continued during the remainder of the senior year.

Length of Program: 4 weeks
Maximum Number of Students: 1 per rotation
When Offered: All Rotations

NCE19 Diagnostic Radiology - Research

Program Director: Anita Thomas, M.D.

Program Outline: The Year 4 Diagnostic Radiology Research Elective is designed as a 4-week research experience intended for students who have selected radiology as their specialty choice. The overall educational objective is for students to develop skills in finding, organizing, evaluating, and presenting clinical radiologic knowledge. These skills should serve as a foundation for understanding how radiologic knowledge is created and how advances in radiologic knowledge and technology are assessed and disseminated. Learning components include attendance at the morning didactic teaching conferences with the residents, limited opportunity for observation in the clinical areas and reading rooms, independent work with a faculty advisor, and presentation of results and conclusions. It is expected that students will spend most of their time working independently, and that they will present the results of their project at the end of the elective. Following faculty review, completed projects may be published on the Department of Radiology's website for the use of others.

Objectives:
1. The student will demonstrate the ability to identify and access sources of radiologic knowledge, including the primary peer reviewed literature, reviews and meta-analyses, non-peer reviewed literature, internet, conferences, and informal communications.
2. The student will demonstrate the ability to evaluate reports of radiologic research, identifying the type of research design, describing the results and data analysis, and assessing the strength of the conclusions.
3. The student will demonstrate the ability to summarize, synthesize, and present radiologic knowledge.

Prerequisites: Completion of Years I-III, completion of RAD02 Diagnostic Radiology - Elective Clinical Clerkship, and permission of course director. Students enrolling in RAD03 will have priority for enrolling in RAD02. Outside students may enroll in RAD03 with permission of the course director on a space-available basis, but must have completed RAD02 or a similar 4-week clinical radiology clerkship at another institution.

Length of Program: 4 weeks
Maximum Number of Students: 4 per rotation
When Offered: Rotations 3-11
Report To: Vicki Ward, at 8:30 am, on the first day of the course, Nuclear Medicine, Main Floor, Reynolds Tower. A maximum of four (4) days may be missed for residency interviews. Students may NOT take this course concurrently with other clerkships or electives.

NCE20 General Surgery Research

Program Director: Carlos Ferrario, M.D.

Program Outline: The student who elects this course will be tutored by the surgical staff in methods of surgical research. Research projects of a limited nature may be carried out by the student if they receive the approval of the sponsor. Taking this course does not fulfill the General Surgery Inpatient Management selective requirement.

Objectives: Upon completion of this Unit, the student will be able to:
9. Describe the theory upon which the research question is based;
10. Describe how the findings from the research project would effect the theory;
11. Describe the research design of the project;
12. Compare and contrast the research design used with others that might have been used;
13. Describe the statistical methods used to analyze the data;
14. Compare and contrast the statistical methods used to those that might have been used;
15. Explain the results of the project;
16. Explain the practical applications of the results of the project.

Prerequisites: None
Length of Program: 4-8 weeks
Maximum Number of Students: 1 per rotation
When Offered: All Rotations
Report To: Carlos Ferrario, M.D.

NCE21 Urology – Research

Program Director: Dean Assimos, M.D. and Ross P. Holmes, Ph.D.

Program Outline: The student will be assigned to one of the research projects now in progress, after consultation with regard to his/her special interest, prior experience and aptitude. He/she will review the protocol with the principal investigator, will be assigned pertinent literature for review and may participate in the conduct of the research program or he/she may elect to attempt a specific assignment on his/her own.

Objectives: Students work closely with faculty, resident staff & other personnel in Urology.

Prerequisites: Completion of Years 1-3
Length of Program: 4-8 weeks
Maximum Number of Students: 1 per rotation
When Offered: All rotations
Report To: Contact Dr. Dean G. Assimos and/or Dr. Ross Holmes for instruction

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NCE22 Emergency Medicine - Research

Program Director: James Winslow, M.D., MPH

Program Outline: The student will have the option of participating in ongoing research in the department or initiating their own research project. The research will be clinically based. The student will have the option of participating in research with any of the emergency medicine faculty who will serve as the faculty mentor. The research project should be of publishable quality. If the

student chooses to initiate their own project it is likely that it will not be able to completed in the 4-week elective; however, it is expected that the 4 week elective will serve as the initial investment of time in order to complete a full project. The 4 weeks the student spends working with the mentor should serve as the foundation for ongoing collaboration with the student's mentor.

The student will have the opportunity to participate in biweekly EM conferences as well as spend clinical time in the ED if so desired. A lecture series going over the basics tenets of research will be given by the group of research attendings. The student will be expected to attend the monthly journal club. The student will have the opportunity to attend an IRB meeting to better understand the aspects of research ethics and design.

Objectives:

- Learn to develop a research question
- Gain familiarity with the ethics of clinical research and the steps necessary to have that research approved by the Institutional Review Board which oversees human subject research
- Develop a plan for analyzing data
- Learn to interpret research results
- Write an abstract or paper summarizing the research results
- Participate in journal club

Elective Goals

Projects:

1. Develop a project of one's own design and write initial protocol and pertinent materials for IRB submission
2. Assist with a project currently underway within the Department of Emergency Medicine

Didactics:

1. Attend IRB Meeting
2. Attend EM Resident Conferences
3. Attend GCRC Research Series lecture of interest
4. Complete CITI Human Research Subjects Course
5. Become acquainted with relevant Biostatistics and Epidemiological tools
6. Have personal sessions with emergency department research mentor on research methods and preparing IRB proposals

Readings: Students will be expected to complete the following readings and will be expected to discuss these reading with their emergency department mentor.

1. Biros, M. H., S. S. Fish, et al. (1999). "Research fundamentals VI: misconduct in biomedical research." Acad Emerg Med 6(8): 840-8.
2. DeBehnke, D. J., J. A. Kline, et al. (2001). "Research fundamentals: choosing an appropriate journal, manuscript preparation, and interactions with editors." Acad Emerg Med 8(8): 844-50.
3. Jones, J. B. (2000). "Research fundamentals: statistical considerations in research design: a simple person's approach." Acad Emerg Med 7(2): 194-9.
4. Hall, K. N. and R. U. Kothari (1999). "Research fundamentals: IV. Choosing a research design." Acad Emerg Med 6(1): 67-74.
5. O'Neil, B. J., J. A. Kline, et al. (1999). "Research fundamentals: V. The use of laboratory animal models in research." Acad Emerg Med 6(1): 75-82.

Prerequisites: This elective is available only to WFUSM students. For credit the student must have completed Year III. Students may participate before this but they will not receive credit.
Length of program: 4 weeks
Maximum number of students: 2 per rotation
When offered: All rotations
Report To: All students must contact Dr. James Winslow before applying for the elective.

OBSTETRICS & GYNECOLOGY

Ob/Gyn Electives for Students Who Do Not Attend
Wake Forest University School of Medicine

Students from outside Wake Forest University School of Medicine are invited and welcome to participate in Year 4 (fourth year) electives in Obstetrics and Gynecology. Because of increasing competitiveness in ob/gyn residency training program positions, our Department requests that the following criteria be met by outside students in order to be assigned to a Year 4 Ob/Gyn elective:

1. The medical student is in good standing in an accredited U.S. medical school and has successfully completed all required third year rotations.
2. The student has scored above 200 on Step 1 of the USMLE.

After receiving the above information, the student will be notified of the rotation to which he/she has been assigned.

Criteria one and two above can be supplied in writing by the extramural student.

OBG03 Reproductive Medicine - North Carolina Baptist Hospital

Program Director: Tamer Yalcinkaya, M.D. and Leslie Kammire, M.D.

Objectives: Medical students completing this rotation should:

1. Be able to interview and take a detailed history of women and/or couples with infertility, reproductive hormonal disorders or pelvic pain.
2. List the causes of infertility and how each of the factors is evaluated.
3. Discuss the causes of recurrent early pregnancy loss and how each of these areas are evaluated.
4. Learn about the common hormonal disorders seen in gynecology such as the amenorrheas, dysfunctional uterine bleeding, hyperprolactinemia and hyperandrogenic states as well as learn how to evaluate these conditions.
5. Observe and learn about the use of laparoscopy and hysteroscopy in the evaluation and treatment of women with infertility, pelvic pain and uterine bleeding.
6. Observe and learn about the surgical approaches to tubal disease, endometriosis, uterine fibroids and pelvic adhesions.
7. Observe and learn about advanced fertility techniques such as IVF.

Program Outline: The student electing the rotation in Reproductive Medicine at NCBH will have exposure in the clinics to patients with endocrinologic and infertility problems. They will learn how to take histories from these patients and to evaluate them. The students will work up all patients admitted for endocrinology studies and/or for surgery and attend related surgery. The student will be exposed to all outpatient procedures including endometrial biopsies, postcoital tests, hysterosalpingograms, and egg retrievals. The student will function at the level of an Acting Intern.

Conferences: There are a number of lectures relating to Endocrinology and Infertility that will be given during the rotation and there is also a weekly Endocrinology Conference in which the student will be expected to participate with the residents..
Rounds: As specified by faculty and residents.
Clinics: Daily, Monday - Friday.

Prerequisites: Completion of Year 3
Length of Program: 4 weeks
Maximum Number of Students: 1 per rotation

When Offered: All rotations
Report To: Contact the resident on Reproductive Medicine. This resident can be reached by calling Kristy Turner @ 716-6476 at Wake Forest University School of Medicine for the name and beeper number of the resident.

OBG05 Women's Health

Program Director: Leslie Kammire, M.D.

Objectives: This rotation is designed for students entering primary care specialties (Family Medicine, Internal Medicine, OBG and Pediatrics) to gain additional experience in women's health, as well as those students planning for surgical specialties who would like additional experience in women's health. This focus of the rotation will be outpatient women's health. Sites will be various ambulatory clinics. By rotations end, the student will have a working knowledge of the following:

- Well woman exam, with emphasis on preventive health measures, (for example, mammography, calcium supplements) and lifestyle counseling.
- Common problems confronting women of various ages
- Medical management of ambulatory patients with specific gynecologic problems, such as abnormal uterine bleeding, vaginitis, etc
- Care of the menopausal patient
- Contraceptive counseling
- Indications for gynecologic surgery and preoperative evaluation of surgical patients
- Thorough breast exam and understanding of benign breast disease
- Thorough pelvic exam
- Office procedures, including vulvar and endometrial biopsies, colposcopy
- Routine obstetric care

Methodologies: Students will spend 2 or 3 days a week with 2 community preceptors working in their private OB/GYN clinics. Students will also attend clinics with several different physicians in the general Obstetrics and Gynecology section, as well as our weekly menopause clinic. Students may also attend a family planning clinic weekly, depending on availability. The student will interview patients independently, perform exams with supervision of the attending physician, and develop a management plan along with the attending. Students will counsel patients about preventive measures, lifestyle, etc., as indicated, write prescriptions, and actively participate in patient care.

Conferences: Students will attend:

- Monday morning resident conference and grand rounds from 7 to 9 AM.
- GYN conference on Wednesday mornings from 7 to 8 AM.
- Students will be asked to give a brief 20 minute presentation during the rotation (chosen from a list of topics unique to women's health) during one of the 7 AM Wednesday morning conferences

Prerequisites: Completion of Year 3
Length of Program: 4 weeks
Maximum Number of Students: per rotation
When Offered: All rotations
Report To: TBA

OPHTHALMOLOGY

OPH01 Ophthalmology – Clinical Clerkship

Program Director: Matthew Giegengack, M.D.

Program Outline: The student will gain practical clinical experience in the following areas: rotation with subspecialty attendings, participating in the Comprehensive Eye Service, assisting the chief resident with emergencies, and assisting junior residents with consultations. The chief resident will work with the student on an appropriate schedule for the month that will include opportunities for each of the above clinical experiences. The student will also participate in all didactic resident lectures and the clinical conferences. The student is expected to present an interesting patient during our scheduled Wednesday morning clinical rounds. Alternately, the student may choose an appropriate topic in Ophthalmology to present to the residents and staff. Students who are seriously considering Ophthalmology as a career are encouraged to do the latter.

Objectives:

1. The student will be able to take a comprehensive and directed ocular history.
2. The student will be able to:
   a. Measure visual acuity using Snellen acuity vision charts (distance and near), measure color vision with pseudoisochromatic color plates, and ascertain the presence or absence of a relative afferent pupillary defect.
   b. Learn the basics of slit lamp operation and be able to visualize anterior segment structures with this device.
   c. Learn to do confrontation visual field testing and will gain insight on the necessity of more formal visual field testing (Goldmann and Humphrey perimetry).
   d. Learn proper and appropriate use of the direct ophthalmoscope, including visualization of the red reflex, and examination of the fundus. As virtually every patient has the pupils dilated, the student will gain confidence in visualization of these structures.
   e. Perform an examination for disturbances of ocular motility and learn to record the results properly.
3. The student will be required to gain specific knowledge concerning the diagnosis, treatment and appropriate referral of the following disorders:
   a. Ocular trauma
   b. Glaucoma (acute and chronic)
   c. Ocular complication of diabetes, especially diabetic retinopathy
   d. Retinal vascular occlusions
   e. Optic neuritis
   f. Anterior ischemic optic neuropathy
   g. Papilledema
4. The student will have exposure to a variety of ocular surgeries and procedures, which should include exposure to at least one case of each of the following surgeries:
   a. Orbit oculoplastic surgery
   b. Cataract surgery
   c. Retinal detachment or vitrectomy surgery
5. The student will develop an appreciation for the complexity of vision and the multitude of problems that can affect the eye and visual system. The student will gain understanding concerning those ocular conditions, which may be treated by nonspecialist and those presenting symptoms that require the services of a skilled ophthalmologist.

Prerequisites: Completion of Years 1-3
Length of Program: 4 weeks
Maximum Number of Students: 2 per rotation. Ophthalmology is not available to outside students.
When Offered: Limited to those interested in ophthalmology as a specialty in rotations 1-3, due to an early matching program; other students may enroll in later rotations.
Report To: Please call Mary Kirk Huske at (336) 716-3971 or stop by 6th floor, Clinical Sciences Building after 9:00 am. *A $10.00 deposit (prefer ten-dollar bill) is required for the use of the textbook during the rotation. Checks will not be accepted and change cannot be given.*

PATHOLOGY

Requests from outside students for Pathology electives should be made through Dr. Patrick Lantz, Department of Pathology, Wake Forest University School of Medicine. A letter of recommendation from a member of the Pathology faculty at the student's medical school is required.

PAT01 Clinical and Forensic Pathology/Autopsy – Clerkship

Program Director: Marcus Simpson, M.D.

Program Outline:
Clinical: The various activities of the Pathology Department are made available to students interested in postgraduate work in any medical field, including Pathology. Programs are individually devised to suit the student's career plans. Students may elect to spend his/her rotation entirely on either anatomic, clinical, or research pathology services, or they may choose a combination of activities from the different divisions. Please contact Dr. P. Lantz or Dr. M. Simpson about the Pathology electives and various rotations.

Forensic: The student will function as an active member of the Autopsy Service and will be available for scene investigations, autopsies and conferences five days a week. This experience will include cases falling under Medical Examiner jurisdiction and natural deaths occurring in the hospital. Cases dealt with may vary from sudden unexpected death, various external causes of death, to complex medical problems causing death in hospital.

Michael Beaty, M.D. (Hematology & Bone Marrow)
Kim Geisinger, M.D. (Surgical Path/Cytopathology)
Patrick Lantz, M.D. (Autopsy/Forensic Pathology)
Gregory Pomper, M.D. (Transfusion Medicine/Stem Cell Lab)
Zak Shihabi, Ph.D. (Chemical Pathology)
Marcus Simpson, M.D. (Clinical Pathology/Transfusion Medicine)
Elizabeth Palavecino, M.D. (Microbiologic Pathology)

Objectives:
Clinical: The student will become adept at correlating laboratory and clinical data and utilizing those correlations in a consultant's capacity.

Forensic:
1. The student will perform 3-5 autopsies a week during his/her rotation.
2. The student will review medical records, investigative reports, and formulate a logical problem list that will direct the autopsy.
3. Upon completion of the autopsy, the student will formulate a logical provisional anatomic diagnosis list based on the underlying cause of death and disease processes identified.
4. The student will be able to dictate a concise but descriptive autopsy report including external examination, evidence of injury and internal examination.
5. The student will review microscopic slides from cases he/she prosected and present findings to faculty members.
6. The student will help finalize the autopsy report, synthesizing the clinical history, scene investigation, autopsy and histopathologic findings, toxicology results and bacteriologic cultures.
7. The student will present autopsy finding at departmental and interdepartmental conferences.
8. The student will attend death scenes when appropriate and assist the forensic pathologist in the death investigation process.
9. The student will read and report on a variety of forensic-related issues including, but not limited to, gunshot wounds, sharp force injuries, blunt force injuries, toxicology, sudden infant death syndrome, child abuse, and vehicular-related deaths.

Prerequisites: Year 3 and prior approval of course director
Length of Program: 4 or 8 weeks
Maximum Number of Students: Clinical - 4 per rotation; Forensic – 1 per rotation
When Offered: All Rotations
Report To: Speak with the specific program director to obtain this information.

PEDIATRICS

Requests from outside students for Pediatric electives should be submitted to the Office of Student Services. Final approval will be given by the Department of Pediatrics, Wake Forest University School of Medicine.

PED01 Pediatric Respiratory Medicine

Program Directors: Bruce Rubin, M.D. and Karl Karlson, M.D.

Program Outline: Selected readings and clinical activities are designed to acquaint the student with current concepts in the evaluation and treatment of children with respiratory disorders, including cystic fibrosis, asthma and bronchopulmonary dysplasia. The student will participate in the work-up of patients in outpatient clinics and will see children with relevant problems on the wards. He/She will learn to evaluate and diagnose common respiratory symptoms, and understand the methodology, reliability and limitations of allergy skin testing, pulmonary function testing and flexible fiberoptic bronchoscopy. The student will also learn to interpret the findings of these tests. The student will be responsible for a seminar on a topic of mutual interest. An introduction to the clinical, epidemiological and laboratory research efforts of the division will be provided.

Objectives: Students will be able to:
1. Understand the epidemiology, manifestations and treatment of asthma;
2. Understand basic respiratory anatomy and physiology and be able to interpret most pulmonary function tests;
3. Understand the pathogenesis and evolution of cystic fibrosis lung disease;
4. Understand the differential diagnosis and evaluation of common persistent respiratory symptoms, signs and radiologic abnormalities;
5. Become familiar with evaluation and management of children with various respiratory disorders.

Prerequisites: Year 3 Pediatric Clerkship
Length of Program: 4 weeks
Maximum Number of Students: 1 per rotation
When Offered: All Rotations
Report To: Pediatric Dept (Pulmonology Section), 2nd Floor, Watlington Hall

PED02 Developmental and Behavioral Pediatrics

Program Director: Elizabeth C. Allen, M.D.

Program Outline: The student will participate in the evaluation and treatment of pediatric outpatients with developmental and behavioral problems at Amos Cottage and other community sites. The student will see children ages 0-3 years for multidisciplinary evaluations at the Children's Developmental Services Agency (CDSA) and in children's homes, observing and interacting with pediatricians, psychologists, speech/language therapists, nutritionists, social workers, and physical and occupational therapists. Children are seen at the CDSA for suspected developmental delay, with or without behavior problems. Typical diagnoses include developmental delay, language delay or disorders, Autism Spectrum Disorders, and motor disorders, such as cerebral palsy. The student may choose to participate in the Intensive Care Nursery Follow-Up Program, which follows infants discharged from the Intensive Care Nursery at Brenner Children's Hospital. Each student will participate in the multidisciplinary evaluation of young children with feeding disorders in KidsEAT Clinic. The student will also see patients with Drs. Allen, Christiaanse, and Klinepeter in their private clinics, treating children and adolescents with many of the above diagnoses, as well as school problems, Attention Deficit Hyperactivity Disorder, oppositional and aggressive behavior, emotional and behavioral disorders, rehabilitation needs, and neurological disorders.

The student will be expected to observe and participate in evaluations as the medical representative of the developmental team. These interactions will be under the direct supervision of a subspecialty-trained developmental and/or behavioral pediatrician. Other responsibilities include participation in conferences with

the professional staff, giving one 30-minute presentation on a developmental/behavioral topic of interest. Each student will review one book on parenting and one developmental/behavioral web site. Past students have enjoyed a "scavenger hunt" in the community and on the Internet, finding and taking digital pictures of items that parents would need to purchase for their children of different ages and developmental levels and needs. Students are encouraged to join with the staff during therapy sessions to learn about the treatment aspect of children with developmental disabilities.

Objectives: At the end of this elective, the student will be able to:

1. Demonstrate proficiency at taking a history focused on developmental and behavioral problems;
2. Perform a thorough neurological and developmental exam on an infant or child;
3. Use the *Diagnostic and Statistical Manual* – 4th Edition to make appropriate diagnoses of Attention Deficit Hyperactivity Disorder, Oppositional Defiant Disorder and Autistic Disorder;
4. Identify children at risk for intellectual disabilities, language disorders, and cerebral palsy;
5. Be familiar with community, electronic, and printed resources available to parents; and
6. Make appropriate referrals for diagnostic and treatment services for patients with the above disorders.

Prerequisites: None
Length of Program: 4 weeks
Maximum Number of Students: 2 per rotation
When Offered: All Rotations (by arrangement with program director)
Report To: Program director at 8:30 AM at Amos Cottage.

PED03 Pediatric Cardiology

Program Director: Amanda Cook, M.D.

Program Outline: This rotation offers experience in the study of congenital and acquired heart disease with emphasis on the clinical manifestations and interpretation of diagnostic tests. Correlation of the anatomic malformation with the physiologic alterations is emphasized as well as the natural history and prognosis. A series of tutorial sessions will be provided as well as the opportunity to attend teaching sessions with the section. The clinical material for this elective is based primarily in the Outpatient Department. Some of our students may choose a different format focusing on inpatient care or diagnostic imaging. A research elective may also be arranged.

Objectives: The student will be familiar with examination of the cardiovascular system in infants and children and the correlation of physical examination and laboratory data, and appropriate utilization of this information in the selection of management plans.

Prerequisites: Year 3 Pediatric Clerkship
Length of Program: 4 weeks
Maximum Number of Students: 1 per rotation
When Offered: All Rotations (Must be approved by program director)
Report To: Program director at 8:00 a.m. in Pediatric Cardiology Office, 2nd Floor, Watlington Hall (Students must notify the Program Director if the course is dropped)

PED04 Pediatric Nephrology

Program Director: Shashi Nagaraj, M.D.

Program Outline: The student will have intensive exposure to all aspects of renal and urinary tract disorders in infants and children. There will be daily ward rounds, assigned topics for seminars, and laboratory evaluation including evaluation of urine and renal biopsy specimens. The student will see ambulatory patients three days a week in the pediatric clinic. Emphasis will be on ambulatory management of common pediatric nephrology problems such as hematuria, proteinuria, urinary tract infections, pediatric hypertension, chronic renal failure and renal transplants. At the end of the

rotation the student should be able to manage common pediatric nephrology problems such as hematuria, proteinuria, nephrotic syndrome, post streptococcal glomerulonephritis and urinary tract infections.

Objectives:

1. To enhance knowledge and skills pertaining to interviewing, physical examination, interpretation of data and clinical judgment.
2. To develop the ability to analyze clinical information and propose rational workup and treatment plan.
3. To present this information in a clear and concise fashion.
4. Write a consultation note which would
   a. identify the problem to be addressed
   b. provide a differential diagnosis in descending order of probability
   c. propose investigation and treatment recommendation
5. Understand the differential diagnosis and management of cardinal problems in pediatric nephrology:
   a. Ambulatory evaluation of hematuria/proteinuria
   b. Hypertension
   c. Acute renal failure
   d. Chronic renal failure
   e. Urinary tract infections
   f. Congenital GU anomalies
6. Be exposed to the fundamentals of renal replacement therapy including the fundamentals of hemodialysis, continuous veno-venous hemofiltration, peritoneal dialysis and renal transplants.
7. Learn to solve problems and seek answer by exposure to the medical literature.

Prerequisites: Completion of Years 1-3
Length of Program: 4 weeks
Maximum Number of Students: 2 per rotation
When Offered: All Rotations
Report To: Dr. Nagaraj/Dr. Lin at 8:00 a.m., Department of Pediatrics, 2nd Floor, Watlington Hall

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PED05 Pediatric Oncology - Outpatient Clinical

Program Director: Marcia Wofford, M.D.

Program Outline: The student will work as a member of the pediatric oncology team in the continuing care of children with cancer. Emphasis will be on:

1. Family centered care
2. Effective patient education
3. Physical diagnosis
4. Communication strategies in stressful situations

Objectives: Upon completion of the elective the student should:

1. Learn the historical, physical and laboratory findings diagnostic of oncologic diseases.
2. Be acquainted with the strategies of oncologic treatment, management of complications, and with toxicities associated with chemoradiotherapy.
3. Be familiar with the known chromosomal and molecular genetic abnormalities underlying hematologic/oncologic diseases, including the familial cancer syndrome.
4. Be acquainted with the psychological and emotional aspects of childhood cancer.

As a member of the pediatric hematology-oncology team, the student participates in evaluating outpatients, occasional rounding on the inpatient Hematology-Oncology Service and performing inpatient consultations. Selected procedures may be performed (lumbar punctures and bone marrow aspirations). The pediatric hematology-oncology faculty will provide the student with a study guide.

Prerequisites: Year 3 Pediatrics
Length of Program: 4 weeks
Maximum Number of Students: 1 per rotation
When Offered: All Rotations
Report To: Program Director, 8:30 am, Pediatric Oncology Clinic, 9th Floor, Brenner Children's Hospital

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PED06 Pediatric Infectious Diseases

Program Directors: Larry Givner, M.D., Avi Shetty, M.D. and Tim Peters, M.D.

Program Outline: Students will have extensive exposure to infants and children with infectious disease. There will be daily ward rounds, Infectious Disease clinic each week, and exposure to various clinical Infectious Disease laboratory tests. Various conferences will be held each week.

Objectives:
1. The student will gain:
   a. A basic knowledge concerning the more common infectious diseases in pediatrics
   b. An approach to management of more complicated infectious disease problems.
2. The student will develop a more in-depth knowledge of:
   a. Antimicrobial therapy
   b. Use of the clinical microbiology laboratory.
3. The student will learn to present cases orally and to write daily progress and consultation notes regarding infectious disease patients.

Prerequisites: Year 3 Pediatric rotation
Length of Program: 4 weeks
Maximum Number of Students: 2 per rotation
When Offered: All Rotations
Report To: Conference Room 2, 11th Floor, Ardmore Tower West @ 8:00 am

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PED08 Pediatric Critical Care

NOTE: This course is identical to ANE03. Final permission to take this course must come from the Office of Student Services.

Program Director: Michael Cannon, M.D.

Program Outline: Daily rounds will begin at 8:00 am. The student should gather necessary clinical information to present and discuss patients in the Pediatric ICU in an established format at morning rounds. Students will acquire necessary clinical information about the patient's clinical status and aid in the execution of treatment plans. An assigned reading list and selected articles relevant to the care of the current patients are provided and should be reviewed by the students prior to completion of this elective. Participation in the resident course lecture series is also expected. The student may choose to make one formal presentation on a subject of his or her choosing as arranged with the PICU attending.

Objective: The student will:
1. Be able to collect and present clinical information about patients in the Pediatric ICU in a clear and concise fashion.
2. Learn the diagnostic hallmarks and management priorities for early and late respiratory failure, hypovolemic and septic shock and cardiopulmonary failure.
3. Be expected to prepare a short presentation on a topic in Peds Critical Care and present it near the end of the rotation to the team. The student will have the opportunity to demonstrate skills in airway management, gaining vascular access, intravascular volume administration and dysrhythmia management.
4. Develop and demonstrate the use of Medline searches for clinically relevant issues regarding the care of the Pediatric ICU patients.

Prerequisites: Year 3
Length of Program: 4 weeks
Maximum Number of Students: 2 per rotation
When Offered: All rotations
Report To: Program Director or Pediatric ICU Attending Physician at 7:45 a.m. in the Pediatric Intensive Care Unit, 6th Floor, Brenner Children's Hospital.

PED09 Genetics

Program Director: Tamison Jewett, M.D.

Program Outline: During this four-week elective, the student will have the opportunity to learn:
1. Clinical genetics, dysmorphology and the diagnosis and management of metabolic disease (as patients permit)
2. Cytogenetics (may observe in the laboratory)
3. Genetic counseling techniques pertaining to prenatal diagnosis, maternal ∝-fetoprotein screening, and clinical genetics.

Objectives:
1. To learn the process of arriving at a definitive diagnosis for a child with a pattern of birth defects.
2. To understand the role of a modern cytogenetic laboratory in the diagnosis of patients and in the investigation of fetal and early neonatal loss.
3. To begin to learn the techniques involved in the diagnosis and management of metabolic disease (if patients with these conditions are seen)

Prerequisites: Satisfactory completion of Year 3 Pediatrics. Student should have signed approval of program director for this elective. Commitments for this elective are binding.
Length of Program: 4 weeks
Maximum Number of Students: 2 per rotation
When Offered: All Rotations (Dr. Jewett's schedule permitting)
Report To: Dr. Jewett - G Floor, Genetics/Genomics Nutrition Building (behind Commons area)

PED10 Pediatric Gastroenterology – Clinical

Program Director: Michael S. Glock, M.D.

Program Outline: Clinical activities in both inpatient and outpatient settings coupled with a core curriculum will provide the student with a solid foundation in the diagnosis and management of common gastrointestinal disease in the pediatric population.

Objective:
1. The student will learn to obtain a complete history and perform a detailed physical examination for the infants and children presenting with gastrointestinal signs and symptoms.
2. Based upon a differential diagnosis obtained from the history and physical examination, the student will be able to formulate a plan for obtaining further diagnostic studies (laboratory, radiographic, procedures).
3. The student will be able to discuss the diagnosis and management of common pediatric gastrointestinal disorders:
   a. Gastroesophageal reflux
   b. Chronic non specific diarrhea
   c. Functional constipation and encopresis
   d. Chronic abdominal pain
   e. Carbohydrate maldigestion
   f. Vomiting
   g. Gastrointestinal bleeding
   h. Jaundice
   i. Failure to thrive
   j. Inflammatory bowel disease
4. The student will learn basic principles of diagnosing and managing nutritional problems in infants and children including failure to thrive and obesity.
5. The student will learn the principles, indications, and contraindications of pediatric gastrointestinal procedures:
   a. Upper endoscopy
   b. Colonoscopy
   c. Hydrogen breath testing
   d. 24 Hour pH probe monitoring and esophageal manometry
   e. Liver biopsies

f. Anorectal and Colonic manometry

Prerequisites: Year 3 Pediatric Clerkship
Length of Program: 4 weeks
Maximum Number of Students: 1 per rotation
When Offered: All Rotations
Report To: Dr. Michael S. Glock at 8:00 a.m. in Pediatric Office, 2nd Floor, Watlington Hall, Secretary Melissa Tuttle 716-3009

PED11 Pediatric Endocrinology

Program Director: Robert P. Schwartz, M.D.

Program Outline: The student will review the medical records on scheduled outpatients and perform history and physical examinations on infants, children and adolescents seen in the Pediatric Endocrine and Diabetes Clinics. Clinic Sessions are held daily. The student will see and examine patients with diabetes mellitus, small stature, growth hormone deficiency, thyroid disorders, congenital adrenal hyperplasia, disorders of pubertal development, Turner Syndrome and disorders of calcium metabolism. Basic textbooks, handouts and reprints will be available for student review. The student will also see inpatients and endocrine consults in the Brenner Children's Hospital. The student will prepare a brief discussion of an endocrine topic for presentation during the last week of the rotation.

Objective: To familiarize the student with the common disorders of growth and development.

Specific Objectives: Appropriate understanding of the following areas:
1. Short stature including constitutional growth delay.
2. Disorders of pituitary hormone physiology, including growth hormone deficiency and diabetes insipidus.
3. Disorders of thyroid hormone physiology, including knowledge of thyroid function tests, congenital and acquired hypothyroidism, hyperthyroidism, thyroid nodules and cancer.
4. Disorders of adrenal gland physiology including congenital adrenal hyperplasia, Addison disease, and Cushing Syndrome.
5. Disorders of sexual differentiation and development, including evaluation of the infant with ambiguous genitalia and the child with delayed & precocious sexual development.
6. Disorders of calcium, phosphorus, Vitamin D metabolism and parathyroid gland physiology.
7. Disorders of carbohydrate metabolism including diabetes mellitus and hypoglycemia.

Prerequisites: Completion of Year 3 Pediatric Rotation
Length of Program: 4 weeks
Maximum Number of Students: 1 per rotation
When Offered: All Rotations **(students must contact Dr. Schwartz before scheduling a specific rotation at extension 63199, or e-mail** rschwrtz@wfubmc.edu**)**
Report To: Dr. Schwartz at 8:15 am on first weekday of rotation in Pediatric Office, 2nd Floor, Watlington Hall

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PED12 Pediatric Hematology/Oncology - Acting Internship

Program Director: Marcia Wofford, M.D.

[This experience is available only to non-WFU students and only at times when WFU students are not fully scheduled doing an Advanced Inpatient Management rotation. This extramural elective should be requested through the WFUSM Office of Student Services and is subject to final approval by the program director.]

Program Outline: The student will develop skills in providing care for children and adolescents diagnosed with cancer or hematologic diseases. The performance of these activities will be supervised by members of the Division of Pediatric Hematology-Oncology in the Department of Pediatrics. Experience will be gained in obtaining historical information and in performing physical examinations upon children with hematologic or oncologic problems as well as order writing and clinical documentation in the medical record. Students will be involved in discussions with the patient and family regarding diagnosis, treatment and prognosis and will experience the multidisciplinary team approach to management of children with chronic illnesses. Students will have the opportunity to learn techniques for accessing internal central venous access devices, performing lumbar punctures and bone marrow aspirates. Call will be every 4th night with a Pediatric intern and 2nd or 3rd year resident.

Length of Program: Pediatric Clerkship
Maximum Number of Students: 1 per rotation
When Offered: All Rotations
Report To: Doctor's Work Room, 9th Floor, Brenner Children's Hospital, Pediatric Hematology Oncology Inpatient Unit @ 7:30 am

PED13 Pediatrics, Brenner Children's Hospital - Acting Internship

Program Director: Marcia Wofford, M.D.

[This experience is available only to non-WFU students and only at times when WFU students are not fully scheduled doing an Advanced Inpatient Management rotation. This extramural elective should be requested through the WFUSM Office of Student Services and is subject to final approval by the program director.]

Program Outline: The student will be responsible for the care of children and adolescents admitted to the Inpatient Service at Brenner Children's Hospital. A wide variety of general and subspecialty problems will be seen. Supervision will be by pediatric residents, general and subspecialty attending
faculty and the department chairman, Dr. Abramson. Students will attend daily rounds and conferences. Other required conferences include Grand Rounds, Pediatric X-ray Conference, House staff Conference or Journal Club and Pathology Conference. Call will be every 4th night with a Pediatric Intern and 2nd or 3rd year Pediatric Resident.

Objectives: The student will learn to care for children and adolescents admitted to the hospital, including:
1. Approach to the diagnosis and management of patients with common and unusual problems;
2. Supportive care and education of the child and family members;
3. Functioning as a member of multidisciplinary team caring for such patients;
4. Management of such patients in a cost-effective manner;
5. Taking part in discharge planning;
6. Involvement in the entire process from referral for admission to discharge.

**** Commitments for this elective are binding ****

Length of Program: 4 weeks
Maximum Number of Students: 2 per rotation
When Offered: All Rotations
Report To: Morning Report at 8:00 am in Pediatrics Conference Room, 11th Floor, Brenner Children's Hospital

PED14 Newborn Pediatrics, Forsyth Medical Center - Acting Internship

Program Director: Robert Dillard, M.D.

[This experience is available only to non-WFU students and only at times when WFU students are not fully scheduled doing an Advanced Inpatient Management rotation. This extramural elective should be requested through the WFUSM Office of Student Services and is subject to final approval by the program director.]

Program Outline: The student will develop skills in providing medical care for newborn infants in the Neonatal Intensive Care Unit of Forsyth Medical Center. The performance of these activities will be supervised by a member of the Division of Neonatology in the Department of Pediatrics, or a pediatric resident. An important part of the program is the experience gained with resuscitation of newborn infants after delivery. Further experience will be gained in obtaining historical information and in performing physical examinations upon infants with significant neonatal illnesses. The student will learn techniques of day-to-day management of infants with a variety of illnesses as well as those who are convalescing from such illnesses. Extensive experience will be gained in neonatal nutrition with emphasis on breastfeeding. Under supervision, the student will develop skills in writing orders, interpreting neonatal x-rays and performing procedures. Finally, the student will be responsible for presenting a seminar on a topic related to neonatal care.

Objectives:
Resuscitation: Understand how to resuscitate and stabilize infants in the delivery area.
Stabilization of the Seriously Ill Infant: Understand the initial management of the critically ill infant.
Common Signs and Symptoms: Understand how to evaluate and manage common signs and symptoms of disease in high-risk newborns.
Common Conditions: Understand how to manage, under the supervision of a neonatologist, common diagnoses in infants in a community hospital nursery.
Diagnostic Testing: Understand how to use and interpret laboratory and imaging studies unique to the NICU setting.
Management and Decision-Making: Develop a logical and effective approach to the assessment and daily management of neonates in a community hospital setting.
Medical Records: Understand how to maintain accurate, timely and legally appropriate medical records in the NICU setting.

**** Commitments to this elective are binding. ****

Length of Program: 4 weeks
Maximum Number of Students: 2 per rotation
When Offered: All Rotations
Report To: Forsyth Medical Center Neonatal Intensive Care Unit, 3rd Floor North Tower at 8:00 a.m.

PED16 Walking in Moonlight: Light for the Journey When Medical Science and Technology Are Not Enough

Program Director: Elizabeth C. Allen, M.D.

Program Outline: The student will interact with patients, families, physicians, and allied health care professionals in outpatient, inpatient, and community settings, focusing on how professionals provide hope to patients and families facing the darkness of illness, disability, or death. The theme for the elective will be "Walking in Moonlight: Light for the Journey When Medical Science and Technology Are Not Enough."

Over the course of the month, the student will develop a portfolio of journal articles, web sites, books, poetry, prose, music, art, and stories about how patients, families, and professionals cope with difficult situations, especially those in which modern medicine is not able to provide a specific diagnosis or effective treatment. Under the supervision of the program director, the student will conduct interviews with patients, families, and a wide variety of professionals, including physicians, nurses, physician assistants, nurse practitioners, psychologists, chaplains, financial counselors, and social workers. These interviews will address the question of how illness has affected the person and how they have coped with it. In addition, the student will spend time identifying electronic, print, and community resources available to patients and families in times of crisis.

Required readings will come from such texts as Kitchen Table Wisdom, by Rachel Naomi Remen, MD; The Anatomy of Hope, by Jerome Groopman, MD; The Healing Power of Faith, by Harold Koenig, MD; and

Attending Children, by Margaret Mohrmann, MD; and A Piece of My Mind, a collection of writings from JAMA. Each professional with whom the student interacts will be asked to give brief electronic feedback on the student's level of interest and participation in that clinical setting.

Objectives: By the end of this elective, the student will be able to:

1. Competently interview a patient and/or family member about the effects of illness on their lives and what strategies they have used to cope with the illness.
2. Identify strategies used by health care professionals in managing the stress they encounter in clinical care.
3. Recommend web sites, books, and other general resources that may support families in times of crisis.
4. Develop an educational handout for patients and families on resources they may find helpful in dealing with a specific disease or condition.
5. Discuss the many ways that health care professionals can support patients and families, particularly in the face of a new diagnosis, chronic or terminal illness, disability, and/or social or financial stressors.
6. Present a PowerPoint presentation on a specific topic that illustrates some of what they have learned.
7. Produce a portfolio on the topic of "Walking in Moonlight: Light for the Journey When Medical Science and Technology Are Not Enough," with several entries a week in the categories of music, poetry, literature, images (photography, art, etc.), religious faith/spirituality, reflections on interviews, journal articles, web sites, books, and community resources.

Prerequisites: None.
Length of Program: 4 weeks
Maximum Number of Students: 2 per rotation
When Offered: All rotations except June and December (by arrangement with program director)
Report To: Program Director at 8:30 AM at Amos Cottage

PSYCHIATRY

Requests from outside students for Psychiatry electives should be made through the program director, Department of Psychiatry, Wake Forest University School of Medicine, (336) 716-4551.

Students who completed the Year 3 clinical clerkship rotation with a grade lower than “Satisfactory” may be allowed to take a senior elective in Psychiatry (and sometimes this would be encouraged), but should not be scheduled until after discussion on an individual basis with the program director.

PSY01 **Out-Patient Psychiatry Clerkship**
North Carolina Baptist Hospital

Program Director: James N. Kimball, M.D.

Program Outline: The student will be assigned to a variety of out-patient treatment settings: adult psychiatry clinic, geropsychiatry clinic, child psychiatry clinic, Neurobehavioral Clinic, and Screening & Referral Clinic. Emphasis is on diagnostic assessment, presentation of cases and clear clinical write-ups.

Objectives: To gain an understanding of psychiatric management of ambulatory patients of a variety of diagnostic types, to develop psychiatric interviewing skills and to develop an understanding of the DSM-IV diagnostic system.

Prerequisites: Satisfactory completion of third year Psychiatry clinical clerkship assignments
Length of Program: 4-8 weeks
Maximum Number of Students: 1 per rotation
When Offered: All Rotations
Report To: Dr. James Kimball, Dept. of Psychiatry, 8th Floor, Clinical Sciences Building. Notify the secretary at 716-9702 one week in advance of the elective period.

PSY02 **Psychiatric Consultation–Liaison Clinical Clerkship**

Program Director: James N. Kimball, M.D.

Program Outline: Requires a full-time assignment to assist the residents working on the Consultation-Liaison Psychiatry Service, which provides psychiatric consultation to all clinical departments of the Wake Forest University Baptist Medical Center. The student will accompany the resident in responding to requests for psychiatric consultations between the hours of 8:30 a.m. and 5:00 p.m. each day. Assessments typically involve chart review, patient and family interview, and discussions with the primary medical/surgical team. Case related references will be provided. Daily rounds will be made with the attending psychiatrist.

Objectives:
1. Perform a complete psychiatric interview and report and record the relevant information.
2. Describe the diagnostic considerations involved in evaluation of a hospitalized patient for depression.
3. List risk factors for suicide and describe the pertinent factors in evaluating a patient for suicidality.
4. Describe the elements necessary for a patient to participate in informed consent, i.e. "competency."
5. Describe the patterns of illness behavior involved in Somatization disorder, Conversion disorder, Factitious disorder, and Malingering.
6. Discuss indications for, and the special considerations involved in, using antidepressants, antipsychotics, and anxiolytics in medically ill patients
7. Perform a Folstein Mini-Mental State Examination in a patient with suspected cognitive impairment.
8. Describe the similarities and differences between Dementia and Delirium and diagnostic tests used to discriminate the two.
9. Describe the nature of the consultative relationship and the process involved in effective psychiatric consultation.

Prerequisites: Satisfactory completion of third year Psychiatry clinical clerkship
Length of Program: 4 weeks
Maximum Number of Students: 1 per rotation
When Offered: All Rotations
Report To: Dr. James Kimball, Dept. of Psychiatry, 8th Floor, Clinical Sciences Building

RADIOLOGY

Requests from outside students for Radiology electives should be made through the Office of Student Services, Wake Forest University School of Medicine.

RAD01 Nuclear Medicine

Program Director: Paige Clark, M.D.

Program Outline: The student will participate in the daily operations of the Nuclear Medicine Department. He/she will interview and examine patients, assist in the interpretation of studies, and participate in all teaching conferences. During this period, audiovisual aids, teaching files, and reading material will be available for student use.

Objective: To provide a student considering Nuclear Medicine or Radiology as a career an opportunity to gain a broader overview of the field. The student will be expected to understand the physiological basis of, be familiar with common abnormal findings on, and have awareness of major clinical indications for:

1. Bone scans
2. Lung scans
3. Myocardial perfusion scans
4. Renal nuclear studies
5. Biliary scans
6. Thyroid scans
7. non-PET oncology scans
8. PET scans

Prerequisites: Prior approval from the preceptor
Length of Program: 4 weeks
Maximum Number of Students: 1 per rotation
When Offered: Rotations 4,5,7,8,9,10,11
Report To: Vicki Ward at 8:30 a.m. in the Nuclear Medicine Department

RAD02 Diagnostic Radiology – Elective Clerkship

Program Director: Anita Thomas, M.D.

Program Outline: The Year 4 Radiology Elective Clerkship is designed as a 4-week clinical experience. The overall educational objective is for students to develop basic skills in radiologic image recognition. These skills should serve as a foundation for learning image interpretation, for understanding the applications and limitations of diagnostic imaging in common clinical situations, and for deriving useful information from radiologic consultations. Learning components include attendance at the two daily teaching conferences with the residents, observation in the clinical areas and reading rooms, small group or independent work in the learning center, didactic teaching sessions, case review exercises with a radiologist, and teaching file case presentations.

Objectives:
1. The student will recognize and describe major anatomic structures and basic radiologic signs on a variety of imaging studies.
2. The student will be able to order imaging examinations in the appropriate sequence for a variety of clinical conditions. The students will be familiar with many of the contraindications and indications for imaging studies, and patient preparation for imaging studies. The student will be able to describe imaging studies and procedures to patients.
3. The student will understand radiology reports and be able to recognize described abnormalities on the corresponding imaging studies.

Prerequisites: Completion of Years 1-3
Length of Program: 4 weeks
Maximum Number of Students: 10 per rotation (minimum number of students = 5 per rotation)
When Offered: Rotations 2,3,5,6,10 and 12. Note that this clerkship is not offered during some of the rotations.

Report To: Vicki Ward at 8:15 am in Nuclear Medicine Conference Room, Nuclear Medicine, Reynolds Tower, Main Floor. Students must be present for the orientation on the first day of the course. A maximum of four (4) days may be missed for residency interviews.

RADIATION ONCOLOGY

Requests from outside students for Radiation Oncology electives should be made through the Office of Student Services, Wake Forest University School of Medicine.

RON01 Radiation Oncology – Clerkship

Program Director: Kevin P. McMullen, M.D.

Program Outline: Student will participate in consultations on new patients and will see previously treated patients. Every patient seen will be discussed with the student and he/she will have full time supervision by a staff physician or senior resident. Regular teaching conferences supplement clinical teaching. The student will be expected to present cases at teaching conferences. The student will give a 30-60 minute talk on a subject related to radiation oncology at the rotation completion.

Objective: An overview of all aspects of clinical radiation oncology can be obtained in a short period of time. A more in-depth experience for those interested in radiation oncology is also available, including radiation physics and biology.

Prerequisites: None
Length of Program: 4 weeks
Maximum Number of Students: 2 per rotation (negotiable)
When Offered: All Rotations
Report To: Dr. McMullen at 8:00 a.m. in Radiation Oncology. Call 713-6505 at least one week prior to beginning of clerkship)

SURGERY

GENERAL SURGERY ELECTIVES

SGG01 Advanced Clinical Clerkship in General Surgery

Program Director: Preston Miller, M.D.

Program Outline: The student will be assigned to a surgical service under the supervision of the attending physician and house officers on that service. This program is designed to permit the student an increasing amount of responsibility in patient care and ward responsibility. The student is encouraged to pursue in depth areas of General Surgery that are of interest to her/him. Individual rounds and discussions are held daily with the student. The student also attends rounds with the attending physician and the house officers.

Objectives: Upon completion of this clerkship, the student will be able to:
1. Elicit the patient's complaint; perform an appropriate, thorough physical examination; suggest appropriate laboratory studies to confirm a diagnosis; and recommend appropriate treatment and management plans;
2. Defend patient management plans which s/he has recommended;
3. Demonstrate a professional demeanor when interacting with patients.

Prerequisites: Completion of Year III
Length of Program: 4 weeks
Maximum Number of Students: No more than one per attending physician
When Offered: All Rotations
Report To: Preston Miller, M.D.

SGG02 Clinical Clerkship for Students Who Do Not Attend WFUSM

Program Director: Preston Miller, M.D.

Program Outline: This program is designed to permit medical students who do not attend Wake Forest University School of Medicine an opportunity to take on an increasing amount of responsibility in patient care and ward responsibility. The student will be assigned to surgical service in General Surgery under the supervision of the attending physician and house officers on that service. The student is encouraged to pursue in-depth areas of General Surgery that are of interest to her/him. Individual rounds and discussion are held daily with the student. The student also attends rounds with the attending physician and the house officers.

Objectives: Upon completion of this Unit, the student will be able to:
1. Elicit the patient's complaint; perform an appropriate, thorough physical examination; suggest appropriate laboratory studies to confirm a diagnosis; and recommend appropriate treatment and management plans;
2. Defend patient management plans which s/he has recommended;
3. Demonstrate a professional demeanor when interacting with patients.

Prerequisites: Completion of three years of medical school.
Length of Program: 4 weeks

Maximum Number of Students: 2 per rotation
When Offered: All Rotations
Report To: Preston Miller, M.D.

SGG03 **Advanced Clinical Clerkship in Surgical Subspecialties**

Program Director: Preston Miller, M.D.

Program Outline: The student may choose two, two week rotations in the surgical subspecialties. The student will work under the supervision of an attending physician and house officers in the subspecialties chosen. Requests for subspecialty electives should be made through Wendy Reedy in the Surgical Administration Office, 5th floor of Watlington Hall, 716-4396. The requests are subject to the approval of the subspecialty chairman.

Objectives: Upon completion of this clerkship, the student will be able to:
1. Elicit the patient's complaint; perform an appropriate, thorough physical examination; suggest appropriate laboratory studies to confirm a diagnosis; and recommend appropriate treatment and management plans;
2. Defend patient management plans which s/he has recommended;
3. Demonstrate a professional demeanor when interacting with patients within the subspecialties on which he/she has rotated.

Prerequisites: Completion of Year 3
Length of Program: 4 weeks
Maximum Number of Students: 2 per service
When Offered: All Rotations
Report To: Preston Miller, M.D.

SURGICAL SPECIALTIES

SGS01 Acting Internship or Clinical Clerkship – Plastic Surgery

Program Director: Lisa R. David, M.D.

Program Outline: Acting Internship: This program is structured and designed to provide the senior medical student who has an interest in plastic surgery and has demonstrated the ability, an opportunity to serve as a supervised house officer. He/she functions and rotates as an intern on the Plastic Surgery service.
Clinical Clerk: The student will share increasing responsibility in patient care, ward responsibility and surgical technique. The student is encouraged to become acquainted with the pertinent literature and current clinical problems in Plastic Surgery as especially related to his/her patients. Individual rounds and group discussions are held frequently with members of the senior staff and house officers.

Objectives: Extensive and advanced training in the evaluation and treatment of plastic surgery patients.

Prerequisites: Students must apply directly to Dr. Lisa David for Acting Internship by application. Scheduling should also be cleared with the Office of Student Services.
Length of Program: 4 weeks
Maximum Number of Students: Only two Acting Interns and one Clinical Clerk per rotation
When Offered: All Rotations
Report To: Call the resident coordinator (336-713-4372) prior to rotation to find out when and where to meet.

SGS02 Cardiothoracic Clinical Clerkship

Program Director: John W. Hammon, M.D.

Program Outline: This elective is designed to provide much greater depth and insight into the field of Cardiothoracic surgery. The course consists of all the daily activities involved in a clinical Cardiothoracic service and deals primarily with patient care and conference attendance. The student is assigned directly to a faculty thoracic surgeon of his/her choice and spends time making rounds, assisting in surgery, attending conferences, seeing consultations and in personal tutoring by his professor and a senior resident. The student is given enhanced responsibilities, which serve to improve his/her growth and development as a house officer and eventually a practicing physician. Numerous important reading assignments are made.

Objectives: This course will permit interested student to enhance their education materially in the field of cardiothoracic surgery and allow adequate exposure for making a career choice in this discipline.

Prerequisites: Completion of Years 1-3
Length of Program: 4 weeks
Maximum Number of Students: 2 per rotation
When Offered: All Rotations

Report To: Call program director at 716-2124 for instructions (5th Floor, Watlington Hall)

SGS03 Neurosurgery – Clinical Clerkship

Program Director: Thomas L. Ellis, M.D.

Program Outline: The objective of this elective is to give the student an overall exposure to neurosurgery as a part of the patient care team. He/she will have the opportunity to study certain interesting patients in detail. He/she can, if desired, function as a clinical clerk or on other occasions as "acting intern" with responsibility at all levels from the ER to the operating room. He/she will have contact with a wide spectrum of organic neurological disorders.

Objectives: Exposure to the neurosurgical clinical experience.

Prerequisites: Completion of Years 1-3
Length of Program: 2 – 6 weeks
Maximum Number of Students: 2 per rotation
When Offered: All Rotations
Report To: The Office of Student Services, 3rd Floor, Watlington Hall @ 8:15 am

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SGS04 Orthopaedic Surgery

Program Director: Ethan R. Wiesler, M.D.

[This experience is available only to non-WFU students and only at times when WFU students are not fully scheduled to do an Advanced Inpatient Management rotation. This extramural elective should be requested through the WFUSM Office of Student Services.]

Program Goal: This rotation is identical to AIM352, except that it's designated for visiting medical students from outside Wake Forest University School of Medicine. During the rotation, the student will serve two 2-week assignments on the following services: trauma/foot and ankle; hand/pediatrics; sports/joints/spine/oncology. The students will take call 5-6 times/month, which includes no more than 2 weekends. Exposure to all aspects of clinical orthopaedics including the operating room, out-patient clinics, in-patient care and the emergency room. In addition, students will attend clinic once weekly.

Methodologies: To acquaint the student with:
1. The scope and character of the practice of orthopaedic surgery
2. The specific encountered diseases and types of surgery performed in the various sub-specialty areas of orthopaedic surgery;
3. Techniques in the care of fractures with emphasis on the use of internal and external fixation as well as the selective use of casting and traction
4. The scope and character of the practice of orthopaedic surgery with particular emphasis on the care of trauma patients, and to provide an opportunity for exposure to training in adult inpatient and outpatient settings.

Prerequisites: Completion of Years 1-3
Length of Program: 4 weeks
Maximum Number of Students:
rotation 1 - 7 (4/22-10/31/08) - 4 students per rotation
rotation 8 -12 (11/3/08-4/3/09) - 1 student per rotation
When Offered: All Rotations (vacation is discouraged during this rotation)
Report to: Administrative Chief Resident at 5:45 am in the study area on Fourth Floor, Watlington Hall who will aid the student in choosing a faculty advisor.

No visiting students Nov. 1, 2009 – Feb. 7, 2010

SGS05 Orthopaedic Surgery – Clinical Elective (Wake Forest Students Only)

Program Director: Orthopaedic Faculty

Sports Medicine/Arthroscopy	David F. Martin, M.D.
Gary G. Poehling, M.D.	
Cristin Ferguson, M.D.	
Walt Curl, M.D.	
Allston Stubbs, M.D.	
L. Andrew Koman, M.D.	
John Frino, M.D.	
Hand/Upper Extremity	L. Andrew Koman, M.D.
Gary G. Poehling, M.D.	
Ethan Wiesler, M.D.	
Zhongyu Li, M.D.	
Christopher Tuohy, M.D.	
Spine	John Birkedal, M.D.
Foot/Ankle	Robert Teasdall, M.D.
Aaron Scott, M.D.	
Oncology	William G. Ward, M.D.
Scott Wilson, M.D.	
Adult Reconstruction	Riyaz Jinnah, M.D.
Jason Lang, M.D	
Trauma	Larry Webb, M.D.
Bob Teasdall, M.D.	
Eben Carroll, M.D.	

Program Outline: This rotation is designed for the student who is NOT planning to pursue Orthopaedic Surgery as a career. During the rotation, the student is assigned to one or two specific Orthopaedic attending physicians for a one or two-week period. The student will accompany the attending physician to all outpatient clinics and to the operating room. No in-patient responsibilities or on-call coverage is required. Attendance at all orthopaedic conferences is mandatory.

Objective:
1. To provide the student with exposure to musculoskeletal problems
2. To provide the student with a basic knowledge in the care of orthopaedic fractures and diseases with emphasis on the use of appropriate casting and traction techniques.

Prerequisites: WFUSM students only; Years I-III and approval of the individual faculty member.
Length of Program: 4 weeks
Maximum Number of Students: 2 per month
When Offered: 1-4, 9-12 (Vacation is discouraged during this elective)
Report To: Individual faculty member as discussed when approval is obtained.

***Student must select & contact faculty member for approval**

SGS06 Otolaryngology

Program Director: J. Dale Browne, M.D.

Program Outline: This elective is offered to senior students who wish to gain further experience in head and neck medicine and surgery. Learning opportunities include experience on the in-patient wards, surgery and in the outpatient clinics during this rotation. Emphasis is on outpatient management with students assigned to faulty and outpatient department clinics, as well as emergency department consults. Conference attendance is required, and exposure to surgical cases are encouraged for valuable learning opportunities.

Objectives: As outlined above

Prerequisites: Year 3
Length of Program: 4 weeks
Maximum Number of Students: 2 per rotation
When Offered: All Rotations
Report To: The Department of Otolaryngology, 4th Floor, Watlington Hall, at 8:30 am

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SGS07 Clinical Clerkship Urology – Hickory, North Carolina

Program Director: E.R. Gerrard, M.D.

Program Outline: Viewmont Urology Clinic is an active, six-man Urology practice, serving Catawba County. The goal of the elective is to give the student an overview of the general practice of Urology, including both inpatient and outpatient contact with pediatric and adult patients. Emphasis will be given to primary care evaluation and treatment of urologic problems, as well as knowing when to refer patients for special evaluation. Students will be expected to attend and assist at surgery.

Objectives: Upon completion of this elective the student will:
1. Be able to take a detailed urologic history and perform a basic urologic examination;
2. Be able to suggest appropriate laboratory and radiologic studies to confirm a diagnosis and recommend appropriate management and treatment plans for patients with cardinal problems in urology;
3. Recognize what can be treated at a primary care level and what should be referred on to a specialist; and
4. Have had first-hand exposure to the basic procedures used in the diagnosis and treatment of patients with urologic disease.

Prerequisites: Completion of Years 1-3
Length of Program: 4 weeks
Maximum Number of Students: 1 per rotation
When Offered: All Rotations
Report To: Contact Chris Wayne, Office Manager at (828) 322-4340, two weeks prior to start of rotation. Students should read chapters 1,3 and 4 in Smith's General Urology prior to beginning the rotation.

SGS08 Pediatric Otolaryngology (WFUSM Students Only)

Program Director: Daniel Kirse, M.D.

Program Outline: This rotation is designed for the student interested in primary care medicine and would like increased exposure to diagnosis, management and referral criteria for pediatric diseases of the head and neck. The student will be exposed to pediatric examination techniques. Time dedicated to clinical or operating room activities will be based on student interest. No on-call or inpatient responsibilities are required. Attendance at all Otolaryngology conferences is mandatory.

Objectives:
1. To provide the student with basic knowledge in the areas of ear, nose and throat problems in the pediatric patient with emphasis on diagnosis, management and referral criteria.
2. Improve physical diagnosis skills in the pediatric patient.

Prerequisites: WFUSM Student Only
Length of Program: 4 weeks
Maximum Number of Students: 1 per rotation
When Offered: All Rotations
Report To: 4th Floor, Watlington Hall on the first morning of the rotation

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SGS09 Urology

Program Director: Steve J. Hodges, M.D.

Program Goal: Offered for senior students seeking an in-depth exposure to the surgical sub-specialty of Urology. The senior student will serve on the Urology Service Actively participating in all Years of urologic diagnostic evaluation, surgery, and departmental conferences. Accommodation can be made for those students with special interest areas in Urology (Urologic Oncology, Pediatric Urology, Stone Disease, Male Sexual Dysfunction, etc.). Those students with an interest in participating in a research program within the Department of Urology should contact a faculty member.

Methodologies: Adult Urology: The student electively rotating on the Adult Urology service should acquire sufficient skills to appropriately evaluate the adult patient with hematuria, urinary outlet obstruction, and urinary tract infection, lower urinary tract symptoms, urinary incontinence, erectile dysfunction.

On completion of this rotation the student will be:

1. Able to take a detailed urologic history and perform a basic urologic examination.
2. Able to organize complicated clinical information for analysis.
3. Able to recommend the appropriate laboratory and uroradiographic studies indicated to confirm a diagnosis and to recommend appropriate management and treatment plans for patients in management of cardinal problems in Urology.
   a. Urinary tract infection
   b. Hematuria
   c. Lower urinary tract symptoms
   d. Urinary calculus disease
   e. Pediatric urologic issues
4. Able to recognize those urologic problems that should be manageable at a primary care level and differentiate those issues from that which should be referred to a urologist.
5. Exposed to fundamentals of urologic surgery including:
   a. Endourology
   b. Open surgical procedures
   c. Pediatric Urology

Length of Program: 4 weeks
Maximum Number of Students: 1 per rotation
When Offered: All Rotations
Report to : Chief Resident in Urology, 5th floor Watlington Hall

Research opportunities in Surgery and Surgical Subspecialties, see NCE12, NCE13, NCE14, NCE17, NCE20 and NCE21 beginning on 80.

SGS10 Orthopaedic Surgery Mentorship

Program Director: Robert D. Teasdall, M.D., Professor of Orthopaedic Surgery

Program Outline: This rotation is an opportunity for a fourth year medical student to spend a four week period in a one on one mentorship with an orthopaedic surgeon. The rotation is open to students who may or may not be planning to pursue a career in

orthopaedic surgery. The student will spend time with the orthopaedic surgeon in the operating room covering both inpatient and outpatient cases. The student will also attend outpatient clinics with the mentor. The primary focus will be to expose the student to disorders of the foot and ankle with particular emphasis on reconstructive procedures, trauma, and the diabetic foot. The goal will be for the student to develop a firm grasp on foot and ankle anatomy and physical examination. Furthermore, the student will be exposed to the lifestyle of an orthopaedic surgeon. No inpatient responsibilities or on call coverage is required.

Weekly Schedule:

Monday	AM conference for pre-operative planning
	Operating room
Tuesday	Outpatient Foot and Ankle Clinic
	Sports Medicine Clinic, Wake Forest University Training Room
Wednesday	Operating room
Thursday	Trauma Conference
	Outpatient Foot and Ankle Clinic
Friday	Pre-Operative Conference
	Operating room vs. clinic

Objectives:
1. Exposure to lifestyle of orthopaedic surgeon
2. To provide the student with exposure to disorders of the foot and ankle.
3. Strong understanding of foot and ankle anatomy and examination
4. Techniques in the care of fractures

Prerequisites: Completion of Years 1-3
Length of Program: 4 weeks
Maximum Number of Students: 1 per rotation
When Offered: All Rotations
Report To: 4th Floor, Watlington Hall first morning of rotation

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URO01 Urogynecology and Pelvic Reconstructive Surgery – North Carolina Baptist Hospital

Program Director: Samuel S. Lentz, M.D.

Objectives: The purpose of this rotation is to give the student an opportunity to gain further experience with female urinary incontinence and pelvic organ prolapse. At the completion of this one-month elective, the student should be able to:

1. Understand the various causes of urinary incontinence in women including the evaluation and management.
2. Recognize the symptoms associated with pelvic organ prolapse.
3. Understand the anatomical abnormalities associated with pelvic organ prolapse and the surgical approaches to correction.

Program Outline: The student will be expected to see patients in the office with the attending faculty. He/she will perform admission history and physical examinations as well as participate in the preoperative, surgical, and postoperative care. Call will not be required.

Conferences:

Monday	7:00-8:00 am	Resident Conference
	8:00-9:00 am	Grand Rounds
Wednesday	7:00-8:00 am	Gynecology Conference

8:00-9:00 am Urogynecology Conference
(The student will prepare a presentation of an assigned topic during one of these conferences.)

Clinics:

Monday	9:00 am-12:00 noon
	1:00-5:00 pm
Wednesday	9:00 am-12:00 noon
Thursday	9:00 am-12:00 noon

OR:
Tuesday and Friday

Rounds: Daily with resident and faculty
Prerequisites: Satisfactory completion of Year 3
Length of Rotation: 4 weeks
Maximum Number of Students: 1 per rotation
When Offered: All rotations
Report To: Contact the 4th year resident on Urogynecology 8:00 a.m. the first day of the rotation.

APPENDIX

WAKE FOREST UNIVERSITY SCHOOL OF MEDICINE

APPLICATION FOR EXTRAMURAL CLERKSHIP
For Students Enrolled in an
LCME (Liaison Committee for Medical Education) Medical School

AAMC Visiting Student Application Service (VSAS)

If you are currently enrolled as a final year medical student in a US medical school that is accredited by the LCME (Liaison Committee for Medical Education), you should apply through **VSAS** www.aamc.org/programs/vsas . Please refer to page 8, Section I of this Program Guide for information on how to apply for an externship through VSAS.

WAKE FOREST UNIVERSITY SCHOOL OF MEDICINE
APPLICATION FOR EXTRAMURAL CLERKSHIP
for
Doctor of Osteopathic Medicine (DO) and International Applicants

DIRECTIONS: Complete Sections I and II of this form. Supply the appropriate letters of recommendation (see Program Guide Electives). Complete the required health form. Enclose a check for the $50.00 non-refundable application fee (payable to Wake Forest University School of Medicine/Student Services). Return all documents to:

Wake Forest University School of Medicine
Office of Student Services, Medical Center Boulevard
Winston-Salem, NC 27157-1085

SECTION I To be completed BY APPLICANT.

Name _____Social Security # _____

Telephone _____ _____ Mailing Address _____
(Day) (Night) _____

CURRENTLY ENROLLED AS A ____ STUDENT E-_____
(Year)

CURRENTLY ENROLLED AT
_____
(Name & Location of Medical School)

COURSE REQUESTED: _____ _____ ___/___/___ to __/___/___
Course # Course Name Dates

ALTERNATE COURSE: _____ _____ ___/___/___ to __/___/___
Course # Course Name Dates

SECTION II To be completed BY DEAN OF STUDENT SERVICES (or comparable official) of the medical school where student is enrolled.

The medical student named above will be a **fourth/final year** student as of (date) _____. He/She is a student in good standing at this institution and is applying for this elective with this school's permission. He/She **will**____ **will not**____pay tuition at our school during the period indicated. Malpractice insurance *(minimum requirement $1,000,000/$3,000,000)* **does**____ **does not**____ cover the student away from our school. Personal health coverage **is**____**is not**____ in effect away from our school. OSHA training is completed annually at our school **yes**____ **no**____. The student is approved to take this clerkship **for**____ **not for**____credit. At the conclusion of the clerkship, an evaluation report **will**____ **will not**____be required. A copy of the evaluation **is attached**____ **will be**____ sent prior to the start of the rotation.

_____ _____ _____ _____
Signature Title Phone Date

*** PLEASE PLACE SCHOOL SEAL OVER THE OFFICIAL SIGNATURE ***

SECTION III APPROVAL (To be completed by the Registrar or the Associate Dean for Student Services of Wake Forest University School of Medicine).

STUDENT IS APPROVED FOR _____ _____
Course Name & Number Dates

Report to: _____ Date & Time:_____

Place:_____

_____	_____	_____
Signature	Title	Date

COPIES TO: STUDENT, WFUSM STUDENT SERVICES & WFU COURSE DIRECTOR
OSS/October 2003

WAKE FOREST UNIVERSITY SCHOOL OF MEDICINE
EMPLOYEE/STUDENT HEALTH SERVICE
IMMUNIZATION REQUIREMENTS FOR DO and INTERNATIONAL VISITING STUDENTS

Name _____ ☐ Medical ☐ Campbell Pharmacy

Birthdate _____ ☐ AHEC ☐ Medical Sonics

There are no exceptions for meeting requirements with this symbol (*) except for medical contraindications or religious objections, which must be in writing.

1. *Tetanus-Pertussis-Diphtheria series . . . . . ____/____/____ , ____/____/____, ____/____/____
   *Tetanus-Diphtheria booster < 10 years old . . . . . ____/____/____
   *TDAP. . . . . ____/____/____

2. *Either A or B must be completed.
   A. *Measles/Mumps/Rubella (MMR) – TWO DOSES after 12 months of age and after 4/22/71 . . . . . (1) ____/____/____ & (2) ____/____/____

OR

   B1. *Measles (Rubeola) – one option must be met:
      a. ☐ **TWO** doses after 12 months of age and after 3/21/73 . .____/____/____ & ____/____/____
      b. ☐ Blood titer proving immunity . . . . . .Date of test: ____/____/____
      TEST RESULT_____

   B2. *Mumps
      a. ☐ **TWO** doses after 12 months of age and after 12/28/67 .____/____/____ & ____/____/____
      b. ☐ Blood titer proving immunity . . . . . .Date of test: ____/____/____
      TEST RESULT_____

   B3. *Rubella (German Measles) – one option must be met:
      a. ☐ Immunization after 12 months of age and after 6/9/69 . .. . .____/____/____
      b. ☐ Blood titer proving immunity . . . . . Date of test: ____/____/____
      TEST RESULT_____

3. *Varicella (Chickenpox or Shingles) Titer – **Blood test required** even with past history of disease or vaccination (Medical/religious objection not applicable).
   Result of test: (Circle one) Positive Negative Date of Test: ____/____/____
   (If negative, must provide proof of at least ONE vaccine dose received)

4. *TB Test must be PPD Test < 12 months before date of arrival (Tine test not accepted).

   Date of Test: ____/____/___Test Date Read: ____/____/____
   Result of Test: _____mm induration

   If last or any previous test was positive, state type and dates of treatment, and result and date of latest
   x-ray:_____

5. *Student must either sign and attach statement of declination or get Hepatitis B series
   Hepatitis B Vaccine . . . . (1) ____/____/____, (2) ____/____/____ & (3) ____/____/____
   Hepatitis B Antibody Test
   Result of test: (Circle one) Positive Negative Date of Test ____/____/____

I hereby certify that the above student meets ALL requirements of Wake Forest University.

_____ _____ _____
Name of School Health Official Title Date

_____
School Address

EMPLOYEE HEALTH SERVICES
REVIEW:_____