PED 199 — Special Study in Pediatric Research (1-5 units)
Course Description: Special study for Pediatric research.
Prerequisite(s): Undergraduate student with consent of instructor based upon adequate preparation as determined by instructor.
Learning Activities: Variable.
Grade Mode: Pass/No Pass only.

PED 299 — Pediatric Research (1-12 units)
Course Description: Pediatric research.
Prerequisite(s): Consent of instructor. Graduate students who are candidates for a degree in some area of biology or behavioral sciences.
Learning Activities: Variable.
Grade Mode: Satisfactory/Unsatisfactory only.

PED 401 — Preceptorship in Pediatrics (2 units)
Course Description: Opportunity to observe and participate in primary medical care in a practicing pediatricians office. Participation in history-taking and physical examination will be at discretion of preceptor and dependent on students experience. Evaluation by student.
Prerequisite(s): Second-year medical student or first-year medical student with consent of instructor.
Learning Activities: Variable.
Grade Mode: Honors/Pass/Fail.

PED 402 — Clinical Experience in Private Practice (1-18 units)
Course Description: Opportunity to participate in practice of preceptor, performing such tasks as history taking, physical examination, and patient management.
Prerequisite(s): PED 430; third-or fourth-year medical student; consent of preceptor and Chairperson.
Learning Activities: Clinical Activity.
Grade Mode: Honors/Pass/Fail.

PED 405 — Pediatrics Lecture Series (0.5 units)
Course Description: Lecture series covers major topics in pediatrics with case presentations and panels from pediatric subspecialists. Topics include, but are not limited to: cardiology, pulmonology, nephrology, gastroenterology, critical care, and primary care pediatrics.
Prerequisite(s): Consent of instructor.
Learning Activities: Lecture 15 hour(s).
Repeat Credit: May be repeated.
Grade Mode: Pass/Fail only.

PED 415 — Fetal & Neonatal Physiology (1 unit)
Course Description: Elective is designed to combine for study a variety of aspects of the physiology, anatomy and biochemistry of the fetus and newborn with relevant clinical examples of disorders in each of the 10 topics that will be discussed.
Prerequisite(s): Consent of instructor.
Learning Activities: Lecture/Discussion 4 hour(s), Independent Study 4 hour(s).
Grade Mode: Pass/Fail only.

PED 430 — Pediatric Clerkship (3-12 units)
Course Description: Eight week clinical clerkship providing students with the opportunity to learn fundamentals of caring for the pediatric patient by participating in nursery, ambulatory and inpatient services at UCDMC and affiliated clinical sites. Rounds, conferences, student presentations ongoing.
Prerequisite(s): Approval by School of Medicine Committee on Student Progress.
Learning Activities: Clinical Activity 45 hour(s).
Enrollment Restriction(s): Restricted to Medical students only.
Grade Mode: Pass/Fail only.

PED 430F — SJVP Pediatric Clerkship at UCSF (12 units)
Course Description: Eight-week clinical clerkship providing students with the opportunity to learn fundamentals of caring for the pediatric patient by participating in nursery, ambulatory and inpatient services at UCSF Fresno. Rounds, conferences, student presentations ongoing.
Prerequisite(s): Approval by School of Medicine Committee on Student Progress.
Learning Activities: Clinical Activity 45 hour(s).
Enrollment Restriction(s): Restricted to Medical students only.
Grade Mode: Honors/Pass/Fail.

PED 430FA — SJVP Longitudinal Pediatrics Clerkship (1.5-6 units)
Course Description: Longitudinal Pediatrics Clerkship runs concurrently with Internal Medicine, Family Medicine and Psychiatry for 32 weeks. Time is spent in direct patient care situations under the guidance of faculty.
Prerequisite(s): Consent of instructor.
Learning Activities: Clinical Activity 40-60 hour(s).
Grade Mode: Honors/Pass/Fail.

PED 430FB — SJVP Longitudinal Pediatrics Clerkship (1.5-6 units)
Course Description: Longitudinal Pediatrics Clerkship runs concurrently with Internal Medicine, Family Medicine and Psychiatry for 32 weeks. Time is spent in direct patient care situations under the guidance of faculty.
Prerequisite(s): Consent of instructor.
Learning Activities: Clinical Activity 40-60 hour(s).
Grade Mode: Honors/Pass/Fail.

PED 430FC — SJVP Longitudinal Pediatrics Clerkship (1.5-6 units)
Course Description: Longitudinal Pediatrics Clerkship runs concurrently with Internal Medicine, Family Medicine and Psychiatry for 32 weeks. Time is spent in direct patient care situations under the guidance of faculty.
Prerequisite(s): Consent of instructor.
Learning Activities: Clinical Activity 40-60 hour(s).
Grade Mode: Honors/Pass/Fail.
PED 430FD — SJVP Longitudinal Pediatrics Clerkship (1.5-6 units)
Course Description: Longitudinal Pediatrics Clerkship runs concurrently with Internal Medicine, Family Medicine and Psychiatry for 32 weeks. Time is spent in direct patient care situations under the guidance of faculty. 
Prerequisite(s): Consent of instructor.
Learning Activities: Clinical Activity 40-60 hour(s).
Grade Mode: Honors/Pass/Fail.

PED 430R — Rural PRIME Pediatrics Longitudinal Clerkship (2 units)
Course Description: Pediatrics Longitudinal Integrated Clerkship for the Rural PRIME Program. 
Prerequisite(s): Consent of instructor.
Learning Activities: Clinical Activity 45 hour(s).
Grade Mode: Honors/Pass/Fail.

PED 430RA — Rural PRIME Pediatrics Longitudinal Clerkship (3 units)
Course Description: Pediatrics Longitudinal Integrated Clerkship for the Rural PRIME Program. 
Prerequisite(s): Consent of instructor.
Learning Activities: Clinical Activity 45 hour(s).
Grade Mode: Honors/Pass/Fail.

PED 430RB — Rural PRIME Pediatrics Longitudinal Clerkship (3 units)
Course Description: Pediatrics Longitudinal Integrated Clerkship for the Rural PRIME Program. 
Prerequisite(s): Consent of instructor.
Learning Activities: Clinical Activity 45 hour(s).
Grade Mode: Honors/Pass/Fail.

PED 430RC — Rural PRIME Pediatrics Longitudinal Clerkship (3 units)
Course Description: Pediatrics Longitudinal Integrated Clerkship for the Rural PRIME Program. 
Prerequisite(s): Consent of instructor.
Learning Activities: Clinical Activity 45 hour(s).
Grade Mode: Honors/Pass/Fail.

PED 430RD — Rural PRIME Pediatrics Longitudinal Clerkship (1 unit)
Course Description: Pediatrics Longitudinal Integrated Clerkship for the Rural PRIME Program. 
Prerequisite(s): Consent of instructor.
Learning Activities: Clinical Activity 45 hour(s).
Grade Mode: Honors/Pass/Fail.

PED 430TA — TeachMS Longitudinal Pediatrics Clerkship (A) (4 units)
Course Description: Longitudinal Clerkship runs concurrently with Primary Care and Psychiatry for 24 weeks. Time is spent in direct patient care situations under the guidance of faculty. On-going patient write-ups, rounds, conferences are required. 
Prerequisite(s): Consent of instructor.
Learning Activities: Clinical Activity 45 hour(s).
Grade Mode: Honors/Pass/Fail.

PED 430TB — TeachMS Longitudinal Pediatrics Clerkship (B) (6 units)
Course Description: Longitudinal clerkship runs concurrently with Primary Care and Psychiatry for 24 weeks. Time is spent in direct patient care situations under the guidance of faculty. On-going patient write-ups, rounds, conferences are required. 
Prerequisite(s): Consent of instructor.
Learning Activities: Clinical Activity 45 hour(s).
Grade Mode: Honors/Pass/Fail.

PED 430TC — TeachMS Longitudinal Pediatrics Clerkship (C) (2 units)
Course Description: Longitudinal clerkship runs concurrently with Primary Care and Psychiatry for 24 weeks. Time is spent in direct patient care situations under the guidance of faculty. On-going patient write-ups, rounds, conferences are required. 
Prerequisite(s): Consent of instructor.
Learning Activities: Clinical Activity 45 hour(s).
Grade Mode: Honors/Pass/Fail.

PED 430RD — TeachMS Longitudinal Pediatrics Clerkship (D) (1 unit)
Course Description: Longitudinal Clerkship runs concurrently with Primary Care and Psychiatry for 24 weeks. Time is spent in direct patient care situations under the guidance of faculty. On-going patient write-ups, rounds, conferences are required. 
Prerequisite(s): Consent of instructor.
Learning Activities: Clinical Activity 45 hour(s).
Grade Mode: Honors/Pass/Fail.

PED 439D — Directed Clinical Studies in Pediatrics (1-12 units)
Course Description: Individual directed studies in extended preparation for modified curriculum or to complete a clinical rotation following a leave of absence. 
Prerequisite(s): Consent of instructor.
Learning Activities: Clinical Activity 40 hour(s).
Repeat Credit: May be repeated.
Grade Mode: Pass/Fail only.

PED 439R — Directed Studies in Pediatrics (1-12 units)
Course Description: Individual directed studies in extended preparation for remediation of all or part of clinical rotation. Clinical studies to accommodate and satisfy remedial work as directed by the Committee on Student Progress and approved by the course IOR. 
Prerequisite(s): Consent of instructor.
Learning Activities: Clinical Activity 30 hour(s), Independent Study 10 hour(s).
Repeat Credit: May be repeated.
Grade Mode: Pass/Fail only.

PED 440 — Pediatrics for the Differentiated Student (3-6 units)
Course Description: One goal is to facilitate the development and reinforcement of the knowledge, skills and attitudes needed as an intern caring for children. Provides a bridge between student experiences in the pre-clerkship phase, the Pediatric clerkship, their Pediatric acting internships and varied Pediatric electives and the Transition to Residency course. 
Learning Activities: Lecture/Discussion 20 hour(s).
Grade Mode: Pass/Fail only.
PED 460A — General Inpatient Pediatric Acting Internship (3-18 units)
Course Description: The Ward Acting Intern functions in a manner similar to that of a pediatric intern. The Acting Intern takes admissions in the regular sequence and is expected to take night call.
Prerequisite(s): PED 430 B or better; and consent of instructor; letter of recommendation from Pediatrics faculty member.
Learning Activities: Internship.
Enrollment Restriction(s): Limited enrollment.
Grade Mode: Honors/Pass/Fail.

PED 460B — Acting Internship: Outpatient Pediatrics (3-18 units)
Course Description: Supervised experience in pediatric care on outpatient service at UCDMC. Student functions as Acting Intern with appropriate supervision by residents and attending faculty.
Prerequisite(s): PED 430 B or better; and consent of instructor; letter of recommendation from Pediatrics faculty member.
Learning Activities: Clinical Activity.
Enrollment Restriction(s): Limited enrollment.
Grade Mode: Honors/Pass/Fail.

PED 461 — Pediatric Inpatient AI in Hematology/ Oncology (6 units)
Course Description: Inpatient and outpatient experience in diagnosis and management of oncologic and hematologic disorders in children. Laboratory experience and participation in clinical investigation may be arranged.
Prerequisite(s): PED 430; consent of instructor; satisfactory completed.
Learning Activities: Clinical Activity 37.50 hour(s), Lecture 7.50 hour(s).
Enrollment Restriction(s): Limited Enrollment.
Grade Mode: Honors/Pass/Fail.

PED 462 — Elective in Pediatric Endocrinology (3-18 units)
Course Description: Inpatient and outpatient experience in diagnosis and management of endocrine disorders in children. Laboratory experience and participation in clinical investigation may be arranged.
Prerequisite(s): Consent of instructor; completion of second-year study or the equivalent.
Learning Activities: Clinical Activity.
Enrollment Restriction(s): Limited enrollment.
Grade Mode: Honors/Pass/Fail.

PED 463 — Medical & Mental Health Evaluation of Children at Risk for Maltreatment (3-9 units)
Course Description: Elective for fourth-year medical students covers basic areas of knowledge needed for child abuse prevention and consultation. Rotation includes legal cases, abuse exams, child and parent interactive therapy and visits to community organizations.
Learning Activities: Clinical Activity 30 hour(s), Discussion 4 hour(s).
Repeat Credit: May be repeated.
Grade Mode: Honors/Pass/Fail.

PED 464 — Acting Internship in Neonatology (3-12 units)
Course Description: Diagnostic and therapeutic aspect of the medical and surgical high-risk neonate. Student expected to take night call.
Prerequisite(s): PED 430 B or better; consent of instructor; letter of recommendation from Pediatrics faculty member.
Learning Activities: Clinical Activity 60 hour(s).
Enrollment Restriction(s): Limited enrollment.
Repeat Credit: May be repeated.
Grade Mode: Honors/Pass/Fail.

PED 465 — Pediatrics Specialty Elective (3-18 units)
Course Description: Supervised experience in a variety of pediatric subspecialties at a local or away site.
Prerequisite(s): PED 430; consent of instructor.
Learning Activities: Clinical Activity.
Enrollment Restriction(s): Limited enrollment.
Grade Mode: Honors/Pass/Fail.

PED 466 — Elective in Pediatric Cardiology (3-18 units)
Course Description: Inpatient and outpatient experience in diagnosis and management of cardiologic disorders in children. Laboratory experience and participation in clinical investigation may be arranged.
Prerequisite(s): PED 430; satisfactory completed.
Learning Activities: Clinical Activity.
Grade Mode: Honors/Pass/Fail.

PED 467 — Elective in Pulmonary Medicine (3-18 units)
Course Description: Inpatient and outpatient management of pediatric patients with pulmonary diseases. These will include but will not be limited to cystic fibrosis, asthma, and other forms of chronic pulmonary diseases as well as congenital abnormalities.
Prerequisite(s): Pediatric clerkship.
Learning Activities: Clinical Activity.
Grade Mode: Honors/Pass/Fail.

PED 468 — Elective in Pediatrics Nephrology (3-18 units)
Course Description: Inpatient and outpatient experience in diagnosis and management of renal disorders in children. Laboratory experience and participation in clinical investigation may be arranged.
Prerequisite(s): PED 430; consent of instructor; satisfactory completed.
Learning Activities: Clinical Activity.
Enrollment Restriction(s): Limited enrollment.
Grade Mode: Honors/Pass/Fail.

PED 469 — Elective in Pediatric Infectious Disease (3-18 units)
Course Description: Inpatient and outpatient experience in diagnosis and treatment of infectious disease of infants and children. Laboratory and clinical investigation may be arranged.
Prerequisite(s): PED 430; consent of instructor; satisfactory completed.
Learning Activities: Clinical Activity.
Enrollment Restriction(s): Limited enrollment.
Grade Mode: Honors/Pass/Fail.
PED 470 — Elective in Pediatric Neurology (3-18 units)
Course Description: Inpatient and outpatient experience in diagnosis and management of neurological disorders in children. Students will also participate in other pediatric subspecialty clinics which serve children with neurological disorders. Does not satisfy the fourth-year neurology requirement.
Prerequisite(s): PED 430; IMD 430; OBG 430; consent of instructor; all courses satisfactory completed.
Learning Activities: Clinical Activity.
Enrollment Restriction(s): Limited enrollment.
Grade Mode: Honors/Pass/Fail.

PED 471 — Elective in Pediatric Gastroenterology (3-18 units)
Course Description: Inpatient and outpatient experience in diagnosis and management of gastroenterology disorders in children. Laboratory experience and participation in clinical investigation may be arranged.
Prerequisite(s): PED 430; consent of instructor; satisfactory completed.
Learning Activities: Clinical Activity.
Enrollment Restriction(s): Limited enrollment.
Grade Mode: Honors/Pass/Fail.

PED 472 — Clinical Rotation in Adolescent Medicine (3-9 units)
Course Description: Under supervision, students will see patients in the UC Davis clinic and at a number of community-based sites. Emphasis on the socially-mediated problems that face adolescents, including substance abuse, STD’s, pregnancy, depression and suicide. One hour of lecture each week.
Prerequisite(s): Consent of instructor; fourth-year Medical Student.
Learning Activities: Clinical Activity 39 hour(s), Lecture 1 hour(s).
Grade Mode: Honors/Pass/Fail.

PED 473 — Away Acting Internship in Pediatrics (6-18 units)
Course Description: Work at the level of a sub intern in inpatient and/or Outpatient settings. Expectation is to provide direct patient management.
Prerequisite(s): Consent of instructor; satisfactory completion of Pediatrics Clerkship.
Learning Activities: Clinical Activity 40 hour(s), Lecture 6 hour(s), Variable.
Grade Mode: Honors/Pass/Fail.

PED 474 — Neonatal (ICU) (4-8 units)
Course Description: The Pediatric ICU at UC Davis Children’s Hospital is a 24 bed ICU on Davis 10 that provides care for critically ill pediatric patients. These patients are usually younger than 18 years of age and can have either primary medical or surgical issues.
Learning Activities: Variable.
Repeat Credit: May be repeated 2 time(s).
Grade Mode: Honors/Pass/Fail Only.

PED 476 — Acting Internship in Pediatric Intensive Care (3-18 units)
Course Description: Evaluation and support of critically ill infants and children. In general, student expected to take night call every third night during rotation.
Prerequisite(s): PED 430 A is required; or consent of instructor; letter of recommendation from Pediatrics faculty member.
Learning Activities: Clinical Activity.
Enrollment Restriction(s): Limited enrollment.
Repeat Credit: May be repeated.
Grade Mode: Honors/Pass/Fail Only.

PED 477 — Pediatric Intensive Care Unit (4-8 units)
Course Description: Evaluation and support of critically ill infants and children. In general, student expected to take night call every third night during rotation.
Learning Activities: Variable.
Repeat Credit: May be repeated 2 time(s).
Grade Mode: Honors/Pass/Fail Only.

PED 479 — Elective in Pediatric Neurology (3-18 units)
Course Description: Evaluation and support of critically ill infants and children. In general, student expected to take night call every third night during rotation.
Prerequisite(s): Consent of instructor.
Learning Activities: Clinical Activity.
Repeat Credit: May be repeated.
Grade Mode: Honors/Pass/Fail Only.

PED 481 — Elective in Pediatric Pulmonology (3-18 units)
Course Description: Evaluation and support of critically ill infants and children. In general, student expected to take night call every third night during rotation.
Prerequisite(s): Consent of instructor.
Learning Activities: Clinical Activity.
Repeat Credit: May be repeated.
Grade Mode: Honors/Pass/Fail Only.

PED 482 — Elective in Pediatric Cardiology (3-18 units)
Course Description: Evaluation and support of critically ill infants and children. In general, student expected to take night call every third night during rotation.
Prerequisite(s): Consent of instructor.
Learning Activities: Clinical Activity.
Repeat Credit: May be repeated.
Grade Mode: Honors/Pass/Fail Only.

PED 483 — Elective in Pediatric Hematology/Oncology (3-18 units)
Course Description: Evaluation and support of critically ill infants and children. In general, student expected to take night call every third night during rotation.
Prerequisite(s): Consent of instructor.
Learning Activities: Clinical Activity.
Repeat Credit: May be repeated.
Grade Mode: Honors/Pass/Fail Only.

PED 484 — Elective in Pediatric Rheumatology (3-18 units)
Course Description: Evaluation and support of critically ill infants and children. In general, student expected to take night call every third night during rotation.
Prerequisite(s): Consent of instructor.
Learning Activities: Clinical Activity.
Repeat Credit: May be repeated.
Grade Mode: Honors/Pass/Fail Only.

PED 485 — Elective in Pediatric Endocrinology (3-18 units)
Course Description: Evaluation and support of critically ill infants and children. In general, student expected to take night call every third night during rotation.
Prerequisite(s): Consent of instructor.
Learning Activities: Clinical Activity.
Repeat Credit: May be repeated.
Grade Mode: Honors/Pass/Fail Only.

PED 486 — Elective in Pediatric Nephrology (3-18 units)
Course Description: Evaluation and support of critically ill infants and children. In general, student expected to take night call every third night during rotation.
Prerequisite(s): Consent of instructor.
Learning Activities: Clinical Activity.
Repeat Credit: May be repeated.
Grade Mode: Honors/Pass/Fail Only.

PED 487 — Elective in Pediatric Transplant (3-18 units)
Course Description: Evaluation and support of critically ill infants and children. In general, student expected to take night call every third night during rotation.
Prerequisite(s): Consent of instructor.
Learning Activities: Clinical Activity.
Repeat Credit: May be repeated.
Grade Mode: Honors/Pass/Fail Only.

PED 488 — Elective in Pediatric Critical Care Medicine (3-18 units)
Course Description: Evaluation and support of critically ill infants and children. In general, student expected to take night call every third night during rotation.
Prerequisite(s): Consent of instructor.
Learning Activities: Clinical Activity.
Repeat Credit: May be repeated.
Grade Mode: Honors/Pass/Fail Only.

PED 489 — Elective in Pediatric Emergency Medicine (3-18 units)
Course Description: Evaluation and support of critically ill infants and children. In general, student expected to take night call every third night during rotation.
Prerequisite(s): Consent of instructor.
Learning Activities: Clinical Activity.
Repeat Credit: May be repeated.
Grade Mode: Honors/Pass/Fail Only.

PED 490 — Elective in Pediatric Infectious Disease (3-18 units)
Course Description: Evaluation and support of critically ill infants and children. In general, student expected to take night call every third night during rotation.
Prerequisite(s): Consent of instructor.
Learning Activities: Clinical Activity.
Repeat Credit: May be repeated.
Grade Mode: Honors/Pass/Fail Only.

PED 491 — Elective in Pediatric Endoscopy (3-18 units)
Course Description: Evaluation and support of critically ill infants and children. In general, student expected to take night call every third night during rotation.
Prerequisite(s): Consent of instructor.
Learning Activities: Clinical Activity.
Repeat Credit: May be repeated.
Grade Mode: Honors/Pass/Fail Only.

PED 492 — Elective in Pediatric Allergy (3-18 units)
Course Description: Evaluation and support of critically ill infants and children. In general, student expected to take night call every third night during rotation.
Prerequisite(s): Consent of instructor.
Learning Activities: Clinical Activity.
Repeat Credit: May be repeated.
Grade Mode: Honors/Pass/Fail Only.

PED 493 — Ethical, Legal & Social Issues in Clinical Genetics (6 units)
Course Description: Develop advanced knowledge, communication skills and attitudes necessary to provide compassionate, knowledgeable, and expert care to patients who may be at increased genetic risk for disease. Seminars cover ethical and legal principles, epidemiology, and genetics.
Prerequisite(s): Consent of instructor.
Learning Activities: Seminar 12 hour(s), Clinical Activity 18 hour(s), Auto Tutorial 8 hour(s), Independent Study 2 hour(s).
Enrollment Restriction(s): Restricted to UC Davis School of Medicine students only.
Grade Mode: Honors/Pass/Fail.

PED 493B — Living with Intellectual & Developmental Disability in the Community (1-6 units)
Course Description: In-depth experience with Intellectual & Developmental Disability across the lifespan.
Prerequisite(s): Consent of instructor.
Learning Activities: Clinical Activity 4 hour(s), Lecture 10 hour(s), Fieldwork 4 hour(s), Seminar 4 hour(s).
Grade Mode: Honors/Pass/Fail.

PED 493C — Fetal & Neonatal Physiology SSM (6 units)
Course Description: Elective is available for students interested in exploring the fascinating world of the fetus and neonate. Designed to combine the basic sciences with relevant clinical examples of disorders.
Prerequisite(s): Consent of instructor.
Learning Activities: Lecture/Discussion 24 hour(s), Clinical Activity 8 hour(s).
Grade Mode: Honors/Pass/Fail.

PED 494 — Intellectual & Developmental Disability in the Community (3-6 units)
Course Description: In-depth experience with Intellectual & Developmental Disability across the lifespan.
Learning Activities: Variable.
Grade Mode: Pass/Fail only.
PED 495 — Fetal & Neonatal Physiology (3-6 units)
Course Description: Didactic is available for students interested in exploring the fascinating world of the fetus and neonate. Designed to combine the basic sciences with relevant clinical examples of disorders. Learning Activities: Independent Study; Discussion 1-3 hour(s). 
Grade Mode: Pass/Fail only.

PED 498 — Directed Group Study (1-5 units)
Course Description: Explore in-depth various topics in Pediatrics. Extensive contact with and oversight by instructor.
Learning Activities: Variable 3-15 hour(s).
Repeat Credit: May be repeated.
Grade Mode: Honors/Pass/Fail.

PED 499 — Research Topics in Pediatrics (1-18 units)
Course Description: Individual research project in pediatric subspecialty areas (cardiology, endocrinology, hematology, metabolism, newborn physiology and others) may be arranged with faculty member. Independent research by student will be emphasized and long-term projects are possible. 
Prerequisite(s): Student in Medical School with consent of instructor.
Learning Activities: Variable.
Repeat Credit: May be repeated.
Grade Mode: Honors/Pass/Fail.