



## UNIVERSITY OF VIRGINIA ANNOUNCES SUMMER SESSION GRADUATE PROGRAM

The Department of Engineering of the University of Virginia announces their graduate program for the Summer Session which will run from June 27 to August 19. Advanced courses in Engineering Mathematics, Theoretical Physics, Theoretical Aerodynamics, and Gas Dynamics will be offered. A distinguished faculty has been secured including Dr. Jesse Wakefield Beams, Dr. Adolph Busemann, Dr. Irving G. Foster, Dr. Joseph Kaplan, Dr. Lawrence Reginald Quarles, Dr. G. N. Ward, and Dr. Gordon Thomas Whyburn.

Those who wish to register may do so by contacting the Training Office. The University plans to enroll approximately 30 students for each class and the program is being advertised on a nation-wide basis. The selection of applicants will be based principally on the order in which the applications are received.

Those who wish to register with the qualification that they "can attend the Summer Session only if Congress approves leave with pay" may do so. However, these registrants can not be put on the list of applicants for courses until the "Leave Bill" is approved by Congress and their attendance at the University is assured.

A student will not be allowed to take more than 6 session hours without permission. Listed below are the courses and a brief description of each. The credit in session hours is shown in parenthesis.

Advanced Engineering Mathematics I (3) - Review of ordinary differential equations, Bessel's Functions, series expansions, orthogonal functions, numerical methods in ordinary differential equations, multiple integrals, improper integrals and line integrals. Prerequisite - Differential Equations, time - 1 hour per day, 8 weeks.

Advanced Engineering Mathematics II (3) - Partial differentiation, partial differential equations, boundary value problems, Laplace's transformation, vector analysis and elements of functions of a complex variable. Prerequisite - Advanced Eng. Math. I. time - 1 hour per day, 8 weeks.

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## WILL GIVE AWAY MOVIE OUTFIT

Bingo enthusiasts will have a chance to win a complete Universal home movie outfit at the Bingo Party next Thursday at 8:30 p.m. at the Activities Building. The home movie outfit includes a Cinermaster II 8 mm movie camera with f2.5 lens, a PC-10 8 mm projector, projection screen, Cinermaster ever-ready carrying case and a roll of film.

Since the jack-pot was won last time, a new one will be started next Thursday with five numbers being called for a Gilbert food mixer and a Philco table model radio. As usual, if no one bingos after five numbers have been called the jack-pot will be held over until the next party when six numbers will be called and another prize added to the group. This method will continue until someone bingos.

As has been the custom for the past few parties, the winners will be given a choice of prizes which include a set of four stainless steel mixing bowls, bathroom scales, luncheon set, bridge set, 3 piece matched Ekco ware, telechrome musical alarm radio, Proctor pop-up toaster, Proctor never-lift iron, Universal perculator, Telechrome selector clock, Manning-Bowman table broiler, waffle iron, Universal pressure cooker, carving set, LaCross manicure set for men and women, set of cannon sheets, set of dishes, and a Waterman pen and pencil set.

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## RED CROSS DRIVE STARTS MARCH 1

The 1949 annual American Red Cross drive will be held at the Laboratory March 1 through 21 and a goal of \$3,500 has been set. The Laboratory staff contributed \$3050 last year.

H. Lee Dickinson, Personnel Division, is campaign chairman at the Laboratory, assisted by James C. Tingle. Organization of the drive has been completed and the approximately 60 volunteer solicitors will begin next week the task of contacting each employee.

The solicitors will operate in four areas under the direction of the following area chairmen: Lucy W. Bainbridge, Administrative Area; Helen N. Foley, Full Scale Area; Janie L. Burroughs, West Area (North), and Barbara J. Durling, West Area (South).

Employees are requested to give their full cooperation to the solicitors, who will make an effort to reach the goal during the early stages of the campaign. It is hoped that NACA employees who are planning to contribute to the Red Cross will do so at the Laboratory and thus help to boost the already-outstanding NACA record of giving to worthwhile causes.

The Laboratory's record in this respect is evidenced in a check of back issues of the "Air Scoop", which show that in the past six years a total of \$51700 has been contributed by staff members in campaigns of two Peninsula organizations, including \$20,175 to the Red Cross and \$31,525 to the Community Chest. This is in addition to contributions to other groups, such as the March of Dimes.

The largest total received in a Red Cross drive at the Laboratory during the past six years was \$5,500 contributed in 1945. If the goal set for 1949 is reached, it will be the second largest drive total in six years.

The Laboratory's campaign is being held in cooperation with the Elizabeth City County Chapter of

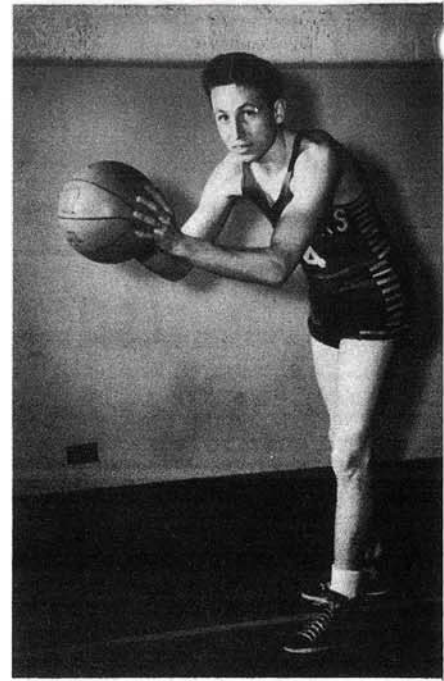
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## MEET THE SKYHAWKS



Ben Tingelhoff

The oldest member of the Skyhawk team is Ben Tingelhoff, Aircraft Loads. Ben was born April 8, 1919 in Lincoln, Nebraska and according to simple mathematics will be 30 years old in April. He graduated from the North High School in Minneapolis, Minnesota and studied Business Administration for a year and a half at the University of Minnesota.

In 1939 Ben entered the U. S. Air Force and was stationed for a while at Langley Field. In 1942 he was transferred to Newfoundland and in 1944 was sent to Italy where he flew 47 combat missions as top turret gunner. He was discharged in 1945 with the rank of Staff Sergeant. Shortly after his discharge he reported for duty at the Laboratory.

Most of Ben's basketball experience here at the Laboratory has been with the Aircraft Loads team in the NACA Basketball League.

Ben stands 6 feet,  $\frac{1}{2}$  inch tall, is married, and is the father of two children.

FOR SALE: Modern two-bedroom bungalow with garage. Stevenson, 624-73rd St. or E. Eng.

NOTICE: Lady will care for infants and small children in her home by day or night. Mrs. Panz, H-32274.

WANTED: Men to teach college level chemistry part time. Friedman, 4522.

## LIFE AT THE LABORATORY

Well, Instrument Research. . . . .

did it again. This newest addition brings the number of arrivals to ten for the year, an average of a little better than one a week. The proud papa of a son, Thomas, is Fred Sheehy and the blessed event took place on Thursday, February 17.

One young lady. . . . .

who has something in common with George Washington is eight pound, two ounce Clare Suegenia Johnson who was born Tuesday, February 22. The proud father is Hal Johnson of 7 X 10-Foot Wind Tunnels and the mother, Sue, is formerly of Stability Analysis.

The Loads Division. . . . .

is back in the race for top honors in the baby derby. Last year the division took top honors with 18 arrivals in one year. The newest addition is a daughter born Wednesday, February 16. The father, Don Reisert, works in Gust Loads and the mother, Edith, is formerly of Loads.

Lots of babies. . . . .

this week. Dan Cupid seems to be taking a vacation while the stork puts in a little overtime. A daughter was delivered to the Charles Rogers on Saturday, February 19. The father works in East Machine Shop and the mother, Julie, is formerly of the Photo Lab.

Still more babies. . . . .

7 X 10 did rather well this week with two arrivals. A six pound, eight ounce daughter, Katherine, was recently delivered to the Richard MacLeod household.

All Apprentices. . . . .

interested in organizing an apprentice club are urged to attend the organizational meeting on Tuesday, March 1 at 8 p.m. in the Projection Room of the Administration Building.

## BRAINBUSTERS PLAN MEETS

At the a meeting of the Brainbusters held last Tuesday night final plans were made for two contests. The first one will be held Sunday from 2 'til 5 p.m. on the west side of the Langley Air Force Base near the fire-fighting demonstration area. The contest will be a hand launched glider event and all classes will be combined. An entry fee of fifty cents will be charged with 50 per cent of the receipts going to first place winner, 30 to second, and 20 to third.

The second contest has been scheduled for March 13 and will be a rubber powered meet with all classes combined. The contest will work on a partnership basis, in other words two con-

FOR SALE: Sofa and chair. Mrs. Hinners, E. Dispensary or H-7334.

FOR SALE: 1931 Model "A" Ford. Barritt, W.N. 21754.

WANTED: Ride from Todds Lane and Jefferson Ave. to E.A. on 8 shift. Hadden, 2368.

testants get together and enter as partners and each partner's best three flights will be added together and the prizes awarded accordingly. It was decided at the meeting that each person should select his partner before the contest rather than wait until contest time to do so. The entrance fee will be one dollar per person or two dollars per team with 60 percent of the receipts going to first place winners and 40 percent to second. No prize will be awarded to third place.

# SKYHAWKS DOWN FT. STORY 46-34

Last week-end the Skyhawks were on and off with a record of one win and one loss. On Friday night the squad journeyed to Fort Story and edged out the Gunners 46-34. At the halfway mark the Gunners were ahead by a two point margin but the Hawks opened up in the final half to take a 46-34 victory. Ken Merten was top man for the winners with a total of 14 points.

Saturday night the Skyhawks ran into a little hard luck and came out on the short end of a 56-47 game with the Little Creek Amphibs. The Hawks got off to a slow start and were trailing 30-14 at the halfway mark. However, they came back in the second half and surged to within four points of the winners but fell short of a win. During the third quarter Bob Thompson, forward, sustained an ankle injury and had to leave the game. High point men for the Hawks were Wally Luchuk and Billy Bates with 15 and 10 points, respectively. Tops for the winners were John Drummer and Walt Diettrich with 15 and 11.

According to business manager Frank Read, the Skyhawks will jangle with the Norfolk Division team in Norfolk tonight and will meet the Radio Engineering School from Washington, D. C. at the Langley gym Sunday at 3 p.m.

## SKYHAWKS

Players	G	F	T
Thompson, f	4	1	9
Merten, f	2	2	6
Bennett, f	0	1	1
Luchuk, c	5	5	15
Bates, g	3	4	10
Hinners, g	0	0	0
Himka, g	0	0	0
Liccini, g	1	4	6

## LITTLE CREEK

Murray, f	0	2	2
Tillman, f	2	3	7
Mulder, f	3	0	6
Drummer, c	7	1	15
Amerson, c	0	0	0
Waller, c	2	1	5
Deittrich, g	5	1	11
Hancock, g	3	2	8
Palco, g	0	1	1
Lallathin, g	0	0	0

WANTED: Passengers from Mollar's Store to W.A. on 7:30 shift. Shobe, 4589.

WANTED: Ride or riding combination from Stuart Gardens to E.A. on 8 shift. Landrum, 2259.

FOR RENT: Bedroom for couple: Mrs. Stevens, H-7526.

# RED CROSS DRIVE

(Continued from page 1)

Red Cross. Chairman of the county campaign this year is Elton W. Miller, who recently retired after a quarter century of service at this Laboratory.

Several other NACA employees are also taking an active part in the county drive. Five are serving as divisional chairmen, including W. E. Willis, George L. Redmon, Harold R. Turner, Sr., John B. Parkinson, and Paul E. Purser. County publicity director is Dr. William A. Aery, who also recently retired from the NACA.

No contribution quotas have been set for the individual employees this year. The only suggestion of the campaign committee in this respect is that each employee give to the best of his ability. The solicitors by areas and the activities they will solicit are as follows:

Administrative Area - Comp. Res. Div. Office, FGDA, RMA, Vivian Adair; Chief, Adm. & Tech. Serv., Maint. Div., Planning, Office of Chief Mech. Serv. Div., Budget, Fay Thomas; Reproduction, Nelda Branham; Files, E. Library, Telephone Exchange, Nancy McCarthy; Const. Eng., Betty Jane Clark; Office of Director, Chief of Res. Res. Records, Res. Personnel, Res. Staff Office, Receptionist, Beth Walker; Elec. Eng., Ann Elks-nin; Inst. Serv., ICL, Pauline Charles; Steno and Report Typing, Gen. Serv. Div. Messengers, Telephone Operators, Supersonic Facilities; Elizabeth McFall; Low Turb., Rosemary Barba; Maint., Frederick Posey; Cafeteria, Sarah B. Rickman; Editorial Office and Foreign Documents, Charlotte Hearn; 24-Inch, Edith Horrocks; Fiscal Division, Leslie Garbett; Eng. Serv. Div., Sandra Yoakum; Personnel, Margaret Young.

Full Scale Area - Special Project 506, Nancy Cromer; Tank #1, Hazel Fisher; FSA, FSR, Mary Catlett; Free Flight, Audrey Duncan; 19-Foot, Jean Walters; FST, Sue Underhill; 8-Foot, Maxine Justice; Tank #2, Frances Rideout, Spin Tunnel, Barbara Burbank; Bell Computers, Doris Porter; E. Eng., Jean Lanahan; E. Model, Dynamic Model; Carrie Tardy; E. Machine, Beatrice Carroll; E. Sheetmetal, Emma McSmith; Flight, Louise Crane and Edith Morrissett, Pilots and FRM&R, Muriel Jackson.

West Area (North) - Stab. Res. Div. and Analysis, Kathryn H. Willis; Stability Tunnel and W. Cafeteria; Bonnie Dettwyler; 7 X 10, Dorothy Carlson; 16-Foot, Maxine Horne; Elec. Shop, Louise Griggs; Report Distribution, Clara Ander-

# BOWLING NEWS

## IRD DUCKPIN LEAGUE

EAC won three games last Monday night to take over the number one spot. Carpetbaggers were dropped to second by virtue of three losses. Noce and Marie Louer still lead in the high individual average group with 104.58 and 93.44, respectively.

## STANDINGS

Team	W	L	Avg.
EAC	13	8	.619
Carpetbaggers	12	9	.571
Missiles	10	8	.555
Bloodhounds	9	9	.500
Cullerites	8	13	.381
Dixiecrats	8	13	.381

## MONDAY DUCKPIN LEAGUE

Mechanical Maintenance is still ahead of 19-Foot by one game. Last week top bowling honors went to Bill Hickman, Somnambowlists, with a 132 game and 344 set and Barbara Durling, PRD, with a 120 game and 316 set.

## STANDINGS

Team	W	L	Avg.
Mech. Maint.	41	19	.683
19-Foot	40	20	.667
Somnambowlists	31	29	.517
Rocketeers	30	30	.500
16-Foot	29	31	.483
PRD	29	31	.483
Tank	28	32	.467
FGDA	28	32	.467
IAL	24	36	.400
Electrical	20	40	.333

FOR SALE: 8 mm Revere projector with case. Hudgens, N.N. 2-7567.

FOR RENT: Room for gentleman. Mrs. Corbett, H-7222.

FOR RENT: Room for girl. Mrs. Mahler, 2306 or Hampton 7711.

son; Aero Loads, Virginia Fox; Gust Loads, Frances Lewelling; ALCL, Pauline Lepper; Impact Loads, Ann Brockett; 9-Inch, Julia Goodman; IAL, Mary Culotta; Generating Plant, H. Payne; Const. Eng. Insp, H. H. Dewhurst; Structures, Florence Mulline; W. Computers, Arminta Prince; W. Model, Coretta Forrest; Heating Plant. Mech. Maint, Dorothy Miller; 4-Foot, Betty Burch.

West Area (South) - PRD, Phyllis Dupille; Inst. Res. Cecelia Elock and Jacqueline Eubank; Purchase, Ruth Miller; Procurement, Kathryn Hodge; Auditing & Bookkeeping, Frances Abernathy, W. Photo, Harry Clason, PARD, Lelia Byrd; W. Eng., Frances White, Stock, Alverta Barnes; W. Sheetmetal, Polly Crews; W. Machine, Jacklyn Fleenor; Model Finishing, Mabel Oss; W. Trans., Const. & Repair, Fire Protection, Myrtle Buchanan.



The Hampton Little Theatre will present "My Sister Eileen" tonight and tomorrow night at 8:15 at the Hampton High School auditorium. Gathered around Ann Mellish and Sallie Whitten, who play the parts of Eileen and Ruth, are (from left) Charles Rodriguez, John B. Parkinson, Sallie Rodriguez, Warren Nelson, Dick Cole, Jose Rodriguez, P. M. Lovell, Betty Johnston, Walter Chapman, Hank Shapiro, and Martin Zlotnick.

## MORE ABOUT INCOME TAX

Deductions may be claimed only by taxpayers who use the long form 1040 and itemize deductions. The following paragraphs set forth some of the things that may or may not be deducted.

**Contributions:** are deductible if they are made to or for the use of the U.S. Government, or that of any State or any political subdivision thereof.

To a corporation, trust, community chest fund, or foundation organized exclusively for purposes that are charitable, religious, educational, scientific, literary, or for the prevention of cruelty to animals or children. The organization must have been created in the U.S. or its possessions.

To a domestic fraternal society operating under the lodge system for any of the purposes listed in the preceding paragraph.

To U.S. War Veterans organizations and auxiliaries.

The amount deductible is limited to 15% of the adjusted gross income. The following contributions are not deductible: personal services, gifts to indi-

viduals, contributions to political parties.

**Interest:** Generally speaking, interest on personal indebtedness is deductible. One of the most common cases of deductible interest is that of interest paid by a taxpayer on a mortgage. The interest component only of the monthly mortgage payment is deductible. Taxpayers should obtain a statement from the mortgagee in order to determine the exact amount of interest paid during the taxable year. Other types of payments which include deductible interest are: judgments, delinquent unpaid taxes, personal loans, installment purchases.

**Taxes:** Deductible taxes include State and local income taxes, personal property taxes, real estate taxes, state or local retail sales taxes and state gasoline tax. The following taxes are not deductible by the individual consumer: Charges for governmental services such as municipal water bills, parking meter charges, service fees, etc.

**FOR SALE:** Gas welding outfit with cutting attachment - \$45. McKee, H-32177.

## GRADUATE SCHOOL

(Continued from page 1)

Differential Equations Applied Mathematics (3) - Ordinary and partial differential equations, vector analysis, and Fourier series. Prerequisite - Differential and Integral Calculus, time - 1 hour per day, 8 weeks.

Introduction to Theoretical Physics (6) - Introduction to methods of theoretical physics. The unity of mathematical form and similarity of thought in the various branches of physics and stressed, while their experimental aspects are kept in view. Prerequisites - Introductory College Physics or General Physics and consent of instructor. time - 2 hours a day 8 weeks.

Theoretical Aerodynamics I (3) Incompressible flow in 2 and 3 dimensions, including vortex motion; subsonic and supersonic compressible flow; linearized theory in 2 and 3 dimensions, etc. Prerequisite - Fundamentals of Aeronautical Engineering and Advanced Engineering Mathematics I, time - 2 hrs. per day, first 4 weeks.

Theoretical Aerodynamics II (3) - Viscous fluids, incompressible laminar boundary layer, elementary compressible boundary layer. Aerodynamic forces, lift coefficients, stability and force derivatives. Prerequisite - Theoretical Aerodynamics I, time - 2 hours per day, second 4 weeks.

Gas Dynamics (6) - The one-dimensional flow through nozzles. Two-dimensional supersonic flow without and with shock waves. Application of supersonic flow theory to two-dimensional problems. The pure subsonic flow in physical plane and hodograph. Three-dimensional problems in pure subsonic and pure supersonic flow. Prerequisite - Elementary Engineering Thermodynamics, time - 2 hours per day, 8 weeks.

Electrical Network Analysis (6) Steady state and transient solutions of electrical networks; networks for special characteristics as filters, equalizers, matching networks, etc. Prerequisites - Direct Current Circuits, Alternating Current Circuits, Transmission Lines, Differential Equations, time - 2 hours, 8 weeks.

**FOR SALE:** Large tricycle, never been used - \$22.50. Baby carriage - \$10. Polhamus, H-32493.

**FOR SALE:** Single hollywood bed. Eleanor Andrews, 7- by 10-Foot.

**FOR SALE:** 1940 Ford deluxe sedan. \$550. Kozal, H-34280.