Tips for Earning Naval Aviator Wings of Gold

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Navy flight school takes beginners who have never held the controls of an aircraft and transforms them into naval aviators. The following tips and suggestions from recent flight school graduates are for current flight students, those about to start, or those considering a naval aviation career.

Flight school is a major commitment. It requires dedication and countless hours of focused effort. For many, it is a challenge unlike any they have ever faced. Learning to fly is very different from learning calculus, though naval flight officers (NFOs) must bring a calculator (affectionately called the "whiz wheel") into the cockpit in the primary training phase. Mastering *how* to study for flight school is just as important as committing to regular study, and good lifestyle habits can enable a student to learn more effectively.

Starting Out

Naval Introductory Flight Evaluation (NIFE) is designed to assess the ability of beginner students to complete flight school and their potential to become fully qualified mission commanders after they earn their wings of gold. It introduces students to the pace and flow of later phases while also building the basic aviation knowledge and skills they will use throughout their careers.

Use the NIFE phase to hone personal and group study habits. Routines established in this phase will become even more important later.

Use Your Imagination

Learning to fly is an apprenticeship, though there is a ground-school portion of every phase that closely resembles a college class. Getting a solid academic foundation requires study habits such as those used to complete an undergraduate degree. However, the ability to take ground school knowledge from the classroom to the cockpit is what separates future

aviators from those who may not make it. Students should maintain study routines that enable classroom learning to be applied on the fly—literally. One widely used study habit is referred to as "chair flying." A student sits in a chair and imagines the chair is the cockpit of the aircraft he or she is preparing to fly.

For the first few chair flights, imagine the hours before stepping foot into the aircraft. This means practicing the brief given to the instructor before inspecting the aircraft for flight. The chair flight continues through the aircraft inspection, all the checklists involved to get off the ground, and finally the profile of the flight itself. Beginners should include all the hand movements, visual scans, and communications that would be necessary in an actual flight. Verbalize as much as possible. Having a visual representation of the instrument panel nearby can be helpful in imagining how the instruments will look in certain maneuvers. Chair events are best accomplished in the days leading up to simulator events and flights.

After getting comfortable with a few chair flights, skip the ground portions and start the chair flight with the interior inspection checklist. While it is important to review the other portions of the event not included in the chair flight, it is not necessary to imagine everything every time. The study routine for flights and simulator practice is crucial to success in every phase of training and is the simplest way to stand out during the real event. Students who complete a maneuver perfectly on the first or second try usually have already practiced it several times in their chairs at home.

Chair flying starts with the basics, such as practicing correct hand movements during a power-off stall. But as students progress, they must imagine more complex maneuvers and scenarios, eventually including tactical scenarios. These can be more difficult to imagine, but making the effort provides at least some of the benefits of increased repetitions. In intermediate and advanced phases of training as an NFO, for example, imagine the tactical events most likely to occur, and rehearse the correct response to those events at home the day before. If planning for a simulated search-and-rescue mission, imagine how to execute the search. What sensors should be used? What actions should be taken when the people in distress are found? What could go wrong?

Work Smarter, Not Harder

The already large amount of information in publications such as the *Naval Air Training and Operating Procedures Standardization Manual* (NATOPS) increases significantly as flight students move from NIFE to the primary and then advanced phases and eventually the fleet. One of the most important skills to develop early is the ability to identify what information matters. For example, bold-faced emergency procedures must be memorized cold.

Knowing how to recover from a steady-state spin is critical. Some information requires familiarity but can be referenced in the corresponding publication or checklist. Reading every page is possible during NIFE but becomes impractical further along the pipeline.

Naval aviation thrives on sharing information and learning from others' mistakes. Always share new information (gouge) with the class. Students separate themselves in performance through rigorous preparation and a little skill, not from withholding gouge. Studying passed-down gouge gives students a good picture of what others have learned, but the gouge is not always comprehensive. Furthermore, the syllabus is constantly changing, and each student has his or her own strengths and weaknesses that require different study. There is a lot of great information to be gleaned from the gouge, but beware of bad information.

Group study is helpful, especially in NIFE or formation flying phases. Keeping in touch with those in earlier and later phases is a great way to answer questions better suited to a fellow student. If possible, study with those a phase or two ahead. They will be able to give timely tips and lessons. Those with a strong understanding of a topic or proficiency with a maneuver should take the time to help other students. However, it is critical that group study does not become a student's only study method. To be able to contribute to the group, students should strive to be familiar with all the material relevant for a session and use the group to find gaps in personal studies.

Developing an individualized pre-event checklist helps students minimize gaps in their preparation and planning. This checklist should include all the information learned in ground school on how to prepare for a flight. It should include a chair flight or two, especially if new or challenging concepts will occur in the next event. Devote time to understanding "discuss items" for the next event, and do not forget to find the answers for the "questions of the day." Many students wait until they are preparing for their brief at the hangar to answer the questions of the day. Mental effort is better spent going over what will be said in the brief and checking for any errors in planning. Scouring the standard operating procedures for the student's crew-day requirement, for example, is less stressful when done at home the day before.

Understand that an aviator is never finished learning. Naval aviators learn critical skills in NIFE, during primary and advanced, and when completing professional qualification standards in the fleet. Therefore, it is imperative to determine what individualized study habits work best to maximize preparation when faced with the quick turnarounds later training demands.

Ask Questions

Students should write down questions that occur as they prepare for their simulators or flights. When finished studying, they should try to answer these questions by looking up the information in flight publications. If an answer cannot be found quickly, ask the instructor before the brief begins. By asking these questions, students not only learn the answer, but also show instructors they have prepared. Most instructors ask questions in the brief to determine the student's level of preparation and knowledge. When students ask questions, they free some instructor time and personalize the learning curriculum. Continually asking questions shows that students are engaged and can also create rapport with instructors, which never hurts when it comes time to fill out the grade sheet.

Get Fit for Flight

Students may stay home if their name or class does not appear on the flight schedule, except for musters or other special circumstances. In addition, most students experience a lengthy delay before starting NIFE. There is also often a delay of a few weeks or more between training phases such as primary and intermediate. For many, time at flight school in Pensacola is their first experience having a wide-open schedule free from academic or extracurricular commitments. Having more autonomy can help or hinder their ability to excel in flight school, depending on how they choose to use their time. There are a few lifestyle habits that will ensure a student makes the most of his or her freedom.

Ensure time for at least eight hours of sleep every night. There are countless health benefits to regularly getting at least that much sleep, but the brain specifically needs it to optimize learning. Crew-rest rules in flight school dictate that students shall be afforded time to sleep eight hours uninterrupted. Sometimes it can be difficult to get a full night's rest if briefing first thing in the morning, but making the effort is worth it. Getting a proper night's sleep can improve memory retention and recall by 20 to 40 percent.[1] This also means not staying up late to study, a common but suboptimal practice.

Consistent physical exercise is another habit that can contribute immensely to a student's ability to regulate stress and other emotions as well as learn new information.[2] Many flight students do not maintain or enhance their physical fitness after they start school. There is enough time to excel in flight school and still exercise daily if fitness is prioritized.

Finally, do not be discouraged by the occasional poor performance. Even Neil Armstrong had an unsatisfactory event in primary on his 15th flight and attended a training review board at which he faced being dropped from training. If the first man to set foot on the moon struggled in primary, every

student should expect to struggle with *something*. Failure is part of flight training. It is important to receive negative feedback well and use it to conduct a better flight the next day.

Excelling at flight school is hard. It is easy to adopt substandard study strategies and be distracted or hindered by life events. Excelling requires sacrifice, so do not expect to make it to every hangout session or bar crawl. But a good faith effort to perform to the best of one's ability will create a solid foundation on which to build a career.

1. Kelly Cappello, "The Impact of Sleep on Learning and Memory," *The Chronobiology and Sleep Institute Blog*, University of Pennsylvania Perelman School of Medicine.

2. Nancy Barile, "Exercise and the Brain: How Fitness Impacts Learning," *Hey Teach!*.